

Prunedale Improvement Project



Final Environmental Impact Report/Environmental Assessment with Finding of No Significant Impact Volume I of II

On Route 101 north of the City of Salinas in Monterey County

05-MON-101-KP R146.8/161.6

(PM R91.2/100.4)

EA 05-0161E0

**Prepared by the
U.S. Department of Transportation
Federal Highway Administration
and the
State of California Department of Transportation**

March 2006



General Information About This Document

What's in this document?

This document contains a Final Environmental Impact Report and Environmental Assessment with Finding of No Significant Impact, which examine the environmental impacts of a proposed project on Route 101 in Monterey County.

The Draft Environmental Impact Report and Environmental Assessment was circulated to the public from May 21, 2005 to July 7, 2005. Responses to the circulated document are shown in Volume II, the Comments and Responses Report. Throughout this document, a line in the margin indicates changes from the draft.

What happens after this?

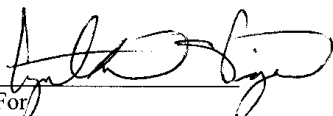
The proposed project is environmentally approved after the circulation of this document. When funding is approved, the California Department of Transportation and the Federal Highway Administration can design and construct all or part of the project.

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**FEDERAL HIGHWAY ADMINISTRATION
FINDING OF NO SIGNIFICANT IMPACT
FOR
Prunedale Improvement Project
On U.S. Highway 101
Monterey County, California**

The Federal Highway Administration (FHWA) has determined that this project will not have any significant impact on the human environment. This finding of no significant impact is based on the attached Environmental Assessment, which has been independently evaluated by the FHWA and determined to adequately and accurately discuss the environmental issues and impacts of the proposed project. It provides sufficient evidence and analysis for determining that an environmental impact statement is not required. The FHWA takes full responsibility for the accuracy, scope, and content of the environmental assessment.

03/13/06
DATE


For
Gene K. Fong
Division Administrator
Federal Highway Administration



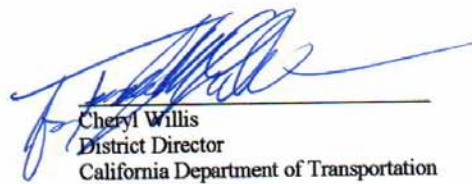
SCH# 2004091124
05-MON-101 PM R91.2/100.4
0161E0

Improve safety and operations on Route 101
north of the City of Salinas in Monterey County

FINAL ENVIRONMENTAL IMPACT REPORT

THE STATE OF CALIFORNIA
Department of Transportation

3/10/06
Date of Approval


Cheryl Willis
District Director
California Department of Transportation



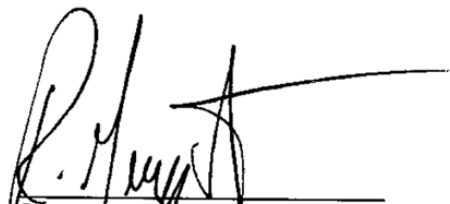
Improve safety and operations on Route 101
north of the City of Salinas in Monterey County

**DRAFT ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL
ASSESSMENT**

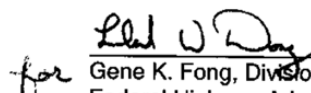
Submitted Pursuant to: (State) Division 13, Public Resources Code
(Federal) 42 USC 4332(2)(C)

U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration, and
THE STATE OF CALIFORNIA
Department of Transportation

5/6/05
Date of Approval


Gregg Albright
District Director
California Department of Transportation

5/12/05
Date of Approval


for Gene K. Fong, Division Administrator
Federal Highway Administration



Summary

The California Department of Transportation (Caltrans) and the Federal Highway Administration propose to construct a series of safety and operational improvements along Route 101 north of the City of Salinas in Monterey County.

Major modifications to Route 101 within the project limits have been proposed since the early 1960s when a project was initiated to construct a 13-kilometer (8-mile) bypass east of the community of Prunedale. That project was set aside because of limited funding, as were two similar projects proposed in later decades. Although funding has not been available for a bypass or widening of the existing highway, the growing congestion and safety concerns in the project area have been addressed incrementally with projects such as a new interchange at San Miguel Canyon Road, modifications to the 101/156 interchange, acceleration and deceleration lanes, shoulder widening, etc. The Prunedale Improvement Project is the most ambitious of these incremental improvements to address safety and traffic operational needs. A long-term congestion relief project is expected to follow as funds become available.

The purpose of the project is to improve safety along Route 101 and intersecting local roadways, improve traffic flow along existing Route 101, and improve accessibility to area homes, businesses, and services. A combination of heavy traffic, numerous uncontrolled access points, a poor local road network, and nonstandard roadway features, have contributed to the deterioration of operating conditions and an increase in collisions along this section of Route 101.

The proposed alternatives include a no-build and a build alternative. The No-Build Alternative has the least environmental impacts, but does not address the purpose and need of the project. No improvements would be made to the existing Route 101 through Prunedale and no construction is proposed. Conditions along this segment of Route 101 would continue to deteriorate.

The Build Alternative proposes to:

- Build a four-lane, fully access-controlled freeway on a new alignment between 0.3 kilometers (0.18 miles) north of the Boronda Road interchange and the intersection of Martines Road.
- Build two new interchanges at Crazy Horse Canyon/Echo Valley Road and 1.0 kilometer (0.62 mile) north of Russell/Espinosa Road.
- Make improvements to an existing interchange at San Miguel Canyon Road.

- Improve and construct local roads, including the addition of one new local road overcrossing and one new local road undercrossing.
- Add median barriers at various locations throughout the project limits.

A list of major potential impacts from the alternatives is summarized in the table at the end of this summary.

The National Environmental Policy Act and the California Environmental Quality Act have different approaches when determining significance (refer to Chapter 4, California Environmental Quality Act Evaluation).

The project would have an effect on the following resources:

- Aesthetics (Visual Resources)
- Biological resources
- Hydrology and water quality

Summary of Major Potential Impacts From Alternatives

Potential Impact		Alternative 1	No-Build Alternative
Land use	Consistency with the Monterey General Plan	Project is consistent with the approved 1982 General Plan	Is consistent with the 1982 Monterey County General Plan (now in revision)
Farmland		Acquisition: Total of 37.64 hectares (93 acres) of farmland of which 15.7 hectares (38.8 acres) are prime and unique farmland and 2.3 hectares (5.6 acres) are of statewide or local importance	No Impact
Relocation	Business displacements	7 businesses	No Impact
	Housing displacements	36 single-family homes 1 Mobile Home 1 Duplex 1 single-residence apartment (conversion)	No Impact
	Utility service relocation	Electric, underground gas pipes, cable, and telephone at several locations	No Impact
Traffic and Transportation / Pedestrian and bicycle facilities		Improvements to safety and local circulation. Addition of pedestrian and bicycle access.	Continued operational and safety issues on Route 101
Visual		Impacts to visual quality. Mitigation would be incorporated in project design.	No Impact

Potential Impact	Alternative 1	No-Build Alternative
Noise	<u>Permanent Impacts:</u> (CEQA) None (NEPA) Noise abatement measures recommended from Boronda to Martines roads: 4 sound barriers proposed <u>Temporary Impacts:</u> Evening and/or night construction noise	No Impact
Vibration	Short-term construction impacts to structures located within 30 meters (100 feet) of new highway structures.	No Impact
Natural Communities	<u>Permanent Impacts:</u> Central Maritime Chaparral – 2.97 hectares/7.33 acres Coast Live Oak Woodland – 3.85 hectares/9.50 acres <u>Temporary Impacts:</u> Central Maritime Chaparral – 2.39 hectares/5.91 acres Coast Live Oak Woodland – 3.74 hectares/9.24 acres	No Impact
Wetlands and Other Waters of the U.S.	<u>Permanent Impacts:</u> Wetlands – 0.43 hectares/ 1.06 acres Other Waters of the U.S. – 0.20 hectare/0.49 acre <u>Temporary Impacts:</u> Wetlands – 0.96 hectare/2.39 acre Other Waters of the U.S. – 0.12 hectare/0.28 acre	No Impact
Plants (Listed by the California Native Plant Society)	<u>Permanent Impacts:</u> <ul style="list-style-type: none"> Branching beach aster – 0.060 hectare/0.146 acres Monterey ceanothus – 0.006 hectare/0.014 acre Pajaro manzanita – 2.97 hectares/7.33 acres 	No Impact
Animals (California Species of Special Concern)	<u>Permanent Impacts:</u> <ul style="list-style-type: none"> Cooper's hawk-none Monterey dusky-footed woodrat-habitat removal, possible individual mortality Southwestern pond turtle-displacement of individuals during construction, loss of use of aquatic and upland habitat yellow warbler-displacement of individuals 	No Impact

Potential Impact	Alternative 1	No-Build Alternative
Threatened or endangered species	<u>Permanent Impacts:</u> California red-legged frog – (occupied habitat) 0.084 hectare/0.208 acre (unoccupied suitable habitat) 0.452 hectare/1.116 acres Monterey spineflower – (occupied habitat) 0.002 hectares/0.006 acres (unoccupied suitable habitat) 0.094 hectares/0.232 acres	No Impact
Exotic Animals/Invasive Plants	No Impact	No Impact
Required Permits/Agreements	1602 Agreement: California Department of Fish and Game; 401 Certification: Regional Water Quality Control Board; 404 Permit: Army Corps of Engineers; Biological Opinion: U.S. Fish and Wildlife Service	N/A

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List of Technical Studies that are Bound Separately

Supplemental Historic Property Survey Report (September 2004)
Historic Property Survey Report (February 2004)
Water Quality Report/Memorandum (October 2003)
Noise Technical Report (Updated February 2006) |
Vibration Study/Memorandum (November 2003)
Air Quality Analysis (April 2004)
Paleontology Report/Memorandum (September 2003)
Hazardous Waste Investigation/Memorandum (October 2003) |
Community Impact Assessment (updated September 2005) |
Visual Impact Assessment (February 2004)
Relocation Impact Statement-Draft (December 2003) |
Final Relocation Impact Memorandum (September 2005) |
Location Hydraulics Study and Floodplain Evaluation (June 2004)
Natural Environment Study (July 2004)
Biological Assessment (April 2005)
Traffic Operational Analysis (June 2004) |

List of Abbreviated Terms

Caltrans	California Department of Transportation
CFR	Code of Federal Regulations
dBA	sound measurement weighted to correspond to human hearing
FHWA	Federal Highway Administration
KP	kilometer post
PM	post mile
PM 10	particulate matter that is 10 microns in diameter or smaller
ppm	parts per million
USC	United States Code

Chapter 1 Purpose of and Need for Project

The California Department of Transportation (Caltrans), and the Federal Highway Administration propose to construct a series of safety and operational improvements along 14.8 kilometers (9.2 miles) of Route 101 north of the City of Salinas in Monterey County (Figures 1-1 and 1-2). Within the project limits, a number of local roads and driveways enter directly onto the highway. The proposed project would:

- Build a four-lane, fully access-controlled freeway on a new alignment between 0.3 kilometers (0.18 miles) north of the Boronda Road interchange and the intersection of Martines Road.
- Construct two new interchanges.
- Improve an existing interchange.
- Improve and construct local roads, including the addition of one new local-road overcrossing and one new local-road undercrossing.
- Place median barriers at various locations throughout the project limits.

This project is not the Prunedale Freeway Project. For information concerning the Prunedale Freeway Project, see the project history section, 1.3.1.

This project is funded with 2004 State Transportation Improvement Program funding and “demonstration project” funding through special federal legislation. The proposed construction funding would be from the State Transportation Improvement Program in the 2008/2009 fiscal year. The State Transportation Improvement Program funds are broken down into the Regional Transportation Improvement Program, which is administered by the Transportation Agency for Monterey County, and the Interregional Transportation Improvement Program, which is administered by the California Department of Transportation. Both the Regional Transportation Improvement Program and the Interregional Transportation Improvement Program are funded using Federal and State dollars. At this time, there are no “local” funding sources for this project such as sales taxes and developer fees.

1.1 Project Purpose

The purpose of the proposed project is to:

- Improve safety along Route 101 and intersecting local roadways
- Improve traffic flow along existing Route 101
- Improve accessibility to area homes, businesses, and services

1.2 Project Need

Route 101 within the project limits is a four-lane divided expressway with 3.7-meter (12-foot) lanes and 1.8- to 2.4-meter (six- to eight-foot) paved shoulders. There are two grade-separated interchanges: one at the Route 101/156 junction, at an approximately equal distance from the northern and southern project limits; and one at the Route 101/San Miguel interchange. There are also 67 driveways and local streets that intersect with the highway at-grade, 24 of which allow left-turn movements across Route 101 traffic.

The combination of heavy traffic, numerous uncontrolled access points, an inadequate local road circulation network, and nonstandard geometric features, have contributed to a deterioration of operating conditions and an increase in collisions along this section of Route 101. As traffic volumes increase, conditions will continue to deteriorate along the highway, resulting in substantial delays, frequent queuing, and more difficult turning movements.

Route 101 within the project limits accommodates significant amounts of interregional traffic, including commercial and agricultural trucking, and tourist and business traffic. The route also carries heavy regional commuter, recreational, and business-related traffic. Route 101 is part of the National Highway System and is functionally classified as a principal arterial. The federal Department of Defense in cooperation with the Department of Transportation has also identified Route 101 as a Strategic Highway Corridor Network route. This is a network of linked highways deemed essential to national defense for facilitating the movement of troops and equipment to airports, ports, rail lines, and military bases.

Route 101 is on the Freeway and Expressway System, whose completion has been declared essential to the future development of the State, with provision for control of access to the extent necessary to preserve the value and utility of the facilities. In addition, Route 101 is on the Interregional Road System and is a designated Focus Route in the Caltrans Interregional Transportation Strategic Plan.

The importance of Route 101 for the movement of goods through the State and nation is indicated by additional federal and state designations. The Route is a designated route on the National Truck Network under the federal Surface Transportation Assistance Act. This network is designated for use by larger trucks. Route 101 is also a State Highway Extra Legal Load Route.

1.2.1 Safety

The primary purpose of this project is to improve safety along Route 101 within the project limits. Operations would also be expected to improve with construction of the proposed design features. The project proposes to reduce accident rates by removing cross-traffic within the project limits. Currently there are 19 local road intersections and 48 driveways along this section of Route 101. Of the 67 access points, 24 allow a left-turn movement across Route 101 traffic (11 at private driveways and 13 at local intersections).

A collision analysis was performed along Route 101, comparing collisions at each of the 15 primary local road intersections and driveway access points to that of the statewide average on a similar roadway (see Table 1.1). This data was collected to determine where the collision concentrations occurred and what the primary collision factors were for individual intersections. This analysis, the Traffic Accident Surveillance and Analysis System-Table B data, was collected for a three-year period between May 1, 2000 and April 30, 2003. The analysis system does not recognize some of the smaller local roads and driveways as intersections. Therefore, a detailed collision analysis is not available for Easy Street, Victoria Lane, Beatrice Drive, Oak Heights, or for the various driveways through the project limits.

The data collected indicates that during this period, there were 271 collisions in the vicinity of intersections with Route 101 that resulted in 92 injuries and 6 fatalities.

Of the 15 primary intersections with Route 101, five have a higher than average concentration of collisions: Russell Road/Espinosa Road, Blackie Road/Reese Circle, Messick Road North, Crazy Horse Canyon Road, and Echo Valley Road.

A separate analysis was performed along Route 101 for collisions on mainline Route 101 that may or may not have had association with intersection collisions. Along the Route 101 mainline within the project limits in the northbound direction, the collision rate (between January 2001 and December 2003) was lower than the statewide average on a similar roadway per million vehicle miles traveled. Within the southbound direction, however, the collision rate was higher than the statewide average. There were 812 collisions on mainline Route 101 within the project limits that resulted in 251 injuries and 9 fatalities. Of those 812 collisions, 381 were in the northbound direction and 431 collisions were in the southbound direction of travel.

Table 1.1 Three-year Accident Totals for Route 101 in the Vicinity of Intersections within Project Limits (May 1, 2000 to April 30, 2003)

Intersection	Number of Collisions	Actual*			Average*		
		Fatal	Fatal + Injury	Total ³	Fatal	Fatal + Injury	Total ³
Russell/Espinosa Road ¹ (PM R91.90)	48	0.015	0.26	0.70	0.008	0.16	0.33
White Road ¹ (PM 92.55)	11	0.000	0.08	0.20	0.004	0.10	0.22
Martines Road (PM 92.80)	7	0.000	0.02	0.11	0.004	0.10	0.22
Ralph Lane ¹ (PM 93.10)	11	0.000	0.05	0.18	0.004	0.10	0.22
Blackie Road/Reese Circle ¹ (PM 94.28)	27	0.032	0.18	0.43	0.004	0.14	0.34
Orchard Lane ¹ (PM 94.34)	11	0.016	0.08	0.18	0.002	0.08	0.19
Pesante Road ¹ (PM 94.50)	21	0.016	0.20	0.33	0.016	0.28	0.55
Berta Canyon Road/Prunedale South Road (PM 95.32)	13	0.000	0.06	0.21	0.004	0.14	0.34
Messick Road-South ¹ (PM 96.39)	19	0.017	0.16	0.34	0.004	0.14	0.34
Messick Road-North (PM 96.58)	14	0.000	0.10	0.24	0.002	0.08	0.19
Tustin Road ¹ (PM 96.89)	9	0.000	0.08	0.15	0.002	0.08	0.19
Mallory Canyon Road ¹ (PM 97.81)	3	0.000	0.00	0.07	0.002	0.08	0.19
Moro Road ¹ (PM 97.98)	10	0.000	0.05	0.17	0.002	0.08	0.19
Crazy Horse Canyon Road ¹ (PM 98.38)	43	0.000	0.21	0.74	0.004	0.10	0.22
Echo Valley Road ¹ (PM 98.69)	24	0.000	0.05	0.41	0.004	0.10	0.22
48 Private Driveways and 4 Minor Local Roads (Total number = 52) ²	-	-	-	-	-	-	-

* Rates = Accidents per Million Vehicles. Bold numbering indicates accident rates above the statewide average for a similar roadway.

¹ Existing intersection allows left-turn movement.

² Oak Heights Drive and 11 of the 48 Private Driveways allow a left-turn movement across Route 101

³ Total includes "property damage only" accidents

1.2.2 Traffic Operations

Present Traffic and Operational Conditions

High traffic volumes, non-standard roadway features, and inadequate access control have contributed to the development of congested conditions and traffic conflicts on Route 101 within the project limits. Volumes along Route 101 currently range from 54,000 to 87,000 Average Annual Daily Traffic in the peak month, and 5,800 to 6,600 vehicles per hour in the peak hour (2003 Traffic Volumes on California State Highways). Trucks account for approximately 8 percent of traffic during peak hours.

Numerous traffic conflicts are generated by the turning and merge/diverge movements from local road and driveway intersections, which cause both substantial delays and frequent long queues for traffic turning left from or onto Route 101. The high traffic volumes and frequent turning movements result in pronounced speed differentials that exacerbate the difficulty motorists experience in attempting to enter and exit Route 101.

Although substantial delays turning left from northbound Route 101 onto San Miguel Canyon Road were resolved with the completion of the interchange in 2002, peak period delays are still common for motorists turning left onto Espinosa, Blackie, Tustin, Moro, and Echo Valley Roads from northbound Route 101. Left-turn delays from southbound Route 101 are found at Ralph Lane, Reese Circle, Pesante Road, Messick Road, and Crazy Horse Canyon Road. Pesante Road serves the Prunedale Elementary School and school bus parking lot, as well as residences. High through-traffic volumes on Route 101 create turning movement delays for both local residents and the heavy volume of school bus trips.

1.2.3 Accessibility

Individuals using local roads within Prunedale must often use Route 101 to get from one place to another. This lack of internal circulation has contributed to increased traffic congestion and safety concerns. The following examples identify just a few of the local access issues:

- Russell Road/Espinosa Road: to get from one side of Route 101 to the other, individuals must cross the highway. Furthermore, individuals wanting to shop or access other amenities in Prunedale must travel north on Route 101.
- Blackie Road/Reese Circle Road: to get from one side of Route 101 to the other, individuals must cross the highway. Furthermore, individuals on the east side of the highway at this location wanting to access Vierra Canyon Road must cross Route 101, or travel several miles out of their way.

- Echo Valley Road/Crazy Horse Canyon Road: to get from one side of Route 101 to the other, individuals must cross Route 101, or travel several miles out of their way.

Future Traffic and Operational Conditions

The Association of Monterey Bay Area Governments is the designated Metropolitan Planning Organization for Monterey, Santa Cruz, and San Benito counties and is responsible for maintaining a traffic model as required by the Clean Air Act Amendment of 1990. The Association of Monterey Bay Area Governments works closely with the Monterey Bay Unified Air Pollution Control District, to prepare transportation plans that meet state and federal standards for ozone, and to perform air quality consistency determinations to address project level impacts on air quality. A single traffic model exists to collectively meet air quality standards set forth for all three counties.

The Association of Monterey Bay Area Governments model was used to forecast traffic demand for each project alternative. Actual traffic counts were used to validate the model's traffic volume projections for current year data. The model does not provide projections beyond 2020. As two percent is both the average growth rate project by the model until 2020 and the historic growth rate in the area, however, it was also used to forecast to the year 2030.

Traffic on Route 101 is expected to increase from the current range of approximately 54,000 to 87,000 vehicles per day to between 99,000 and 160,000 vehicles per day in 2030. Corresponding to this increase, analysis suggests the level of service would decrease on Route 101, and that gaps in traffic flow would continue to decrease. The decreased traffic gaps, and increased congestion would exacerbate the conflict between local and through traffic, and further restrict local circulation in the Prunedale area.

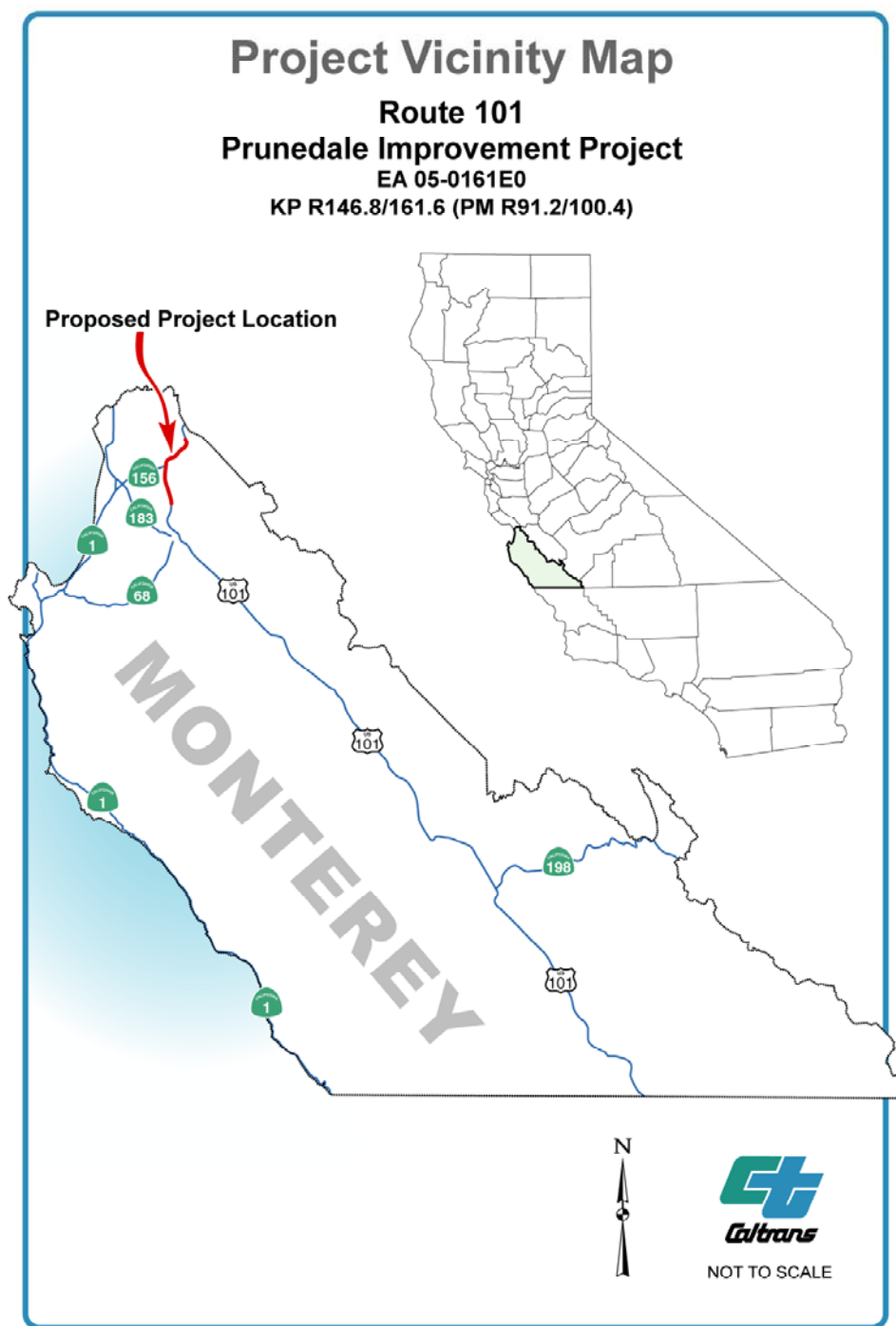


Figure 1-1 Project Vicinity Map

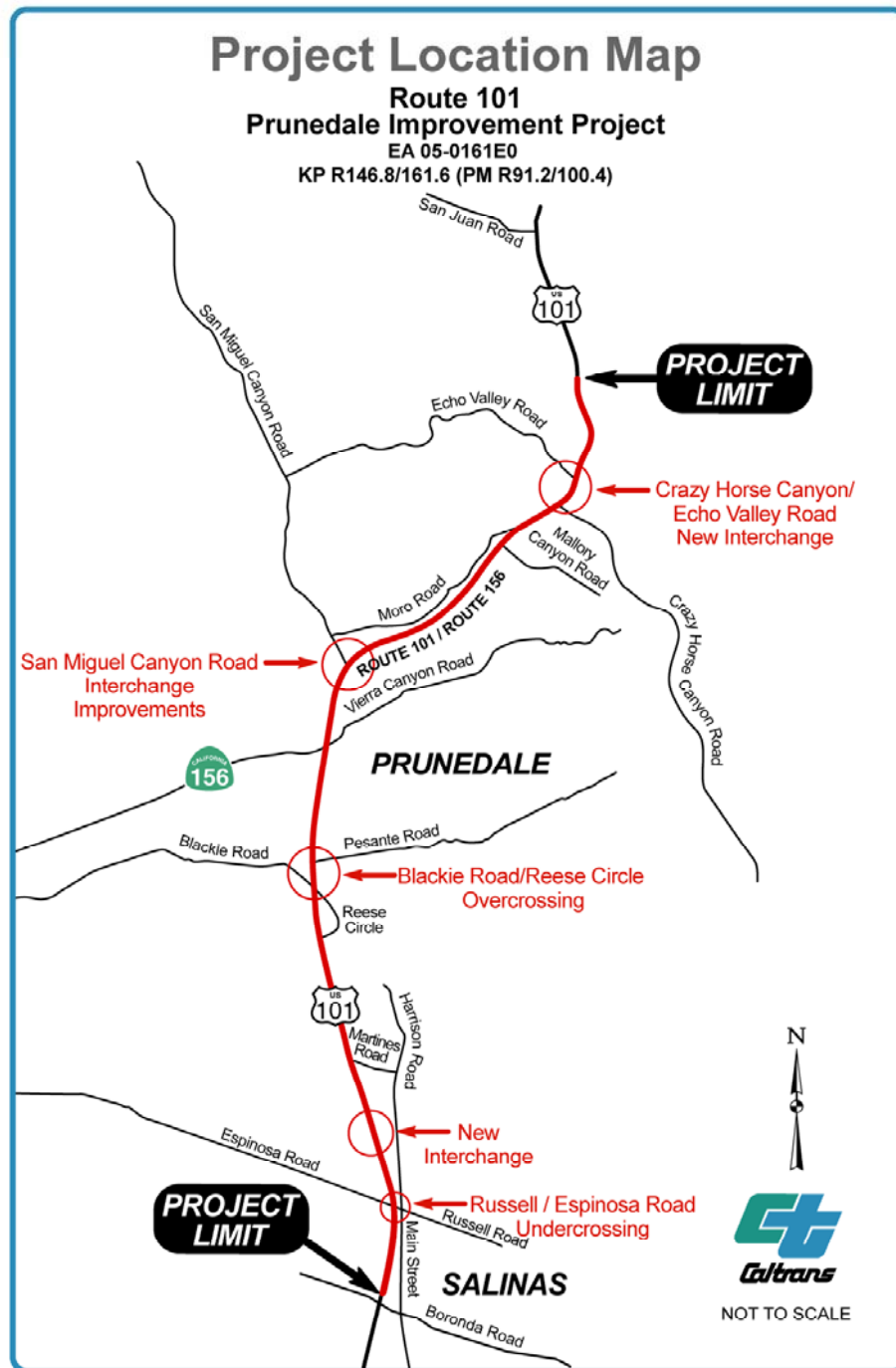


Figure 1-2 Project Location Map

1.3 Project Background

1.3.1 Project History

U.S. Route 101, or Route 101, is one of only three major north-south highways in California and is a primary link in the highway network serving interstate traffic in the western United States. Route 101 is also a major north-south arterial in Monterey County, providing access to the agricultural areas of the Salinas Valley and serving recreational travelers to the Pacific Coast and the Los Padres National Forest.

In the early 1960s, a project was initiated to improve the segment of Route 101 in the project area by constructing a 13-kilometer (eight-mile) bypass east of the community of Prunedale. The route adoption and freeway agreement were approved, and substantial right-of-way for the bypass alternative was acquired before the development of the National Environmental Policy Act, the California Environmental Quality Act, and other environmental laws now in effect. The project was in the final design phase when it was determined that funding was not available and it was set aside.

That same project was restarted as a locally funded (Measure B sales tax) project in the late 1980s. To meet the federal and state environmental processes put in place in the 1970s, alternatives matching the same limits of the original bypass project were developed and evaluated. A Draft Environmental Impact Statement/Environmental Impact Report was completed and circulated to the public in 1993. Before a Final Environmental Impact Statement/Environmental Impact Report could be approved, however, the local sales tax measure was overturned in court and funding was again unavailable.

In early 1999, funding again became available for the freeway project. Public information meetings and focus groups were held to review the alternatives from the 1993 Draft Environmental Impact Statement/Environmental Impact Report and to develop new alternatives to address changed conditions. A rapid escalation in the cost of right-of-way, however, again left the freeway project without sufficient funding.

In 2002, the Transportation Agency of Monterey County passed a resolution that stated (in part) that the Transportation Agency of Monterey County and Caltrans would take a phased approach to addressing transportation needs along Route 101. Caltrans would construct safety and traffic operational improvements first, followed by congestion and long-term relief improvements. This proposed project, known as

the Prunedale Improvement Project, has been developed to address the safety and traffic operational needs.

This project would improve safety and traffic operations by: reducing traffic conflicts; consolidating or reducing access points; constructing two interchanges, an overcrossing, and an undercrossing; constructing and improving local roads; and placing median barrier (within the project limits) where gaps currently exist. With the exception of the segment south of the new interchange, the mainline alignment would be unchanged. Between Russell Road and the new interchange, the highway would be relocated east of the existing alignment and would be fully access-controlled.

1.3.2 Related Projects

The Prunedale Improvement Project is part of a continuing effort by the Transportation Agency of Monterey County and Caltrans to improve Route 101 in the project area. In the past five years, five safety and operational projects have been constructed. In addition to the Prunedale Improvement Project (anticipated project completion date Spring 2012), two other projects are planned for the future:

- **156 West Corridor.** The conversion of the existing two-lane highway to a four-lane expressway/freeway. The limits of the proposed project on Route 156 extend from near the City of Castroville just east of the 156/183 Separation to Route 101 in Prunedale. This project would include a full interchange at the intersection of Route 101 and 156. This project would ease congestion and improve safety in and near Castroville.
- **Prunedale Freeway Project.** A project proposed to increase capacity on Route 101 from north of Boronda Road near Salinas to just south of San Juan Road. This project would include alternatives within the existing Route 101 corridor and a bypass around the community of Prunedale.

Chapter 2 Project Alternatives

2.1 Alternative Development Process

The purpose of the proposed project is to improve safety along Route 101 and intersecting local roadways; improve traffic flow along existing Route 101; and improve accessibility to area homes, businesses, and services. Alternatives were developed to accomplish these purposes, as well as to minimize environmental impacts, meet state design standards, and minimize cost.

2.2 Project Alternatives

Throughout the process of preliminary engineering design and development of the environmental document, the project development team studied alternative solutions, held public information meetings, and met with local officials. As more was learned about the project area, the range of alternatives was narrowed to two alternatives; the “No-Build” and one build alternative were selected.

Final selection of a preferred alternative would not be made until after the full evaluation of environmental impacts, full consideration of public comments, and approval of the final environmental document.

2.2.1 The “No-Build” Alternative

Consideration of a No-Build Alternative is required by the National Environmental Policy Act and the California Environmental Quality Act. The No-Build Alternative has the least environmental impacts, but does not address the purpose and need of the project. Under the No-Build Alternative, no improvements would be made to existing Route 101 within the project limits and no construction would be proposed.

Conditions along this segment of Route 101 would continue to deteriorate and accident rates at the 10 locations would continue to be above the statewide average for the same type of roadway.

2.2.2 The “Build” Alternative

Only one viable build alternative could be developed that met the primary purpose of improving safety while remaining within budget and minimizing environmental impacts (shown in Figures 2-1 through 2-9). Variations of that alternative were

designed, evaluated, and modified to the proposed features (see Section 2.3 for additional detail).

Beginning at the south end, the proposed project features include:

- A four-lane, fully access-controlled freeway on a new alignment between 0.3 kilometers (0.18 miles) north of the Boronda Road interchange and the intersection of Martines Road.
- An undercrossing at the new elevated freeway at Russell and Espinosa Roads, connecting the two local roads and allowing through movements from the east and west sides of Route 101. No access to Route 101 would be provided at this location.
- An extension of, and improvement to, an existing local road (Access Road 1), which lies north of Espinosa Road.
- A new local road and interchange (overcrossing) constructed approximately 1.0 kilometer (0.62 mile) north of Russell/Espinosa Road.
- Widening the local road intersection of Main Street/Harrison Road and Russell/Espinosa Road.
- Auxiliary lanes between Boronda Road interchange and the new interchange north of Russell/Espinosa.
- A new local road connecting White Road to Martines Road.
- A cul-de-sac at the intersection of Martines Road and Route 101. Direct access to Route 101 from Martines Road would be eliminated and rerouted to the new interchange north of Russell/Espinosa Road.
- A new local road extending south from the intersection of Blackie and Prunedale South Roads. The new road would cross over Route 101 approximately 320 meters (1050 feet) south of the existing Blackie/Reese and Route 101 intersection and connect to Reese Circle, 130 meters (427 feet) east of Cross Road.
- An extension of Pollock Lane from Pesante Road south to Cross Road.
- Widening Cross Road, between Reese Circle and Pollock Lane.
- A cul-de-sac at the intersection of Orchard Lane and Route 101. Direct access to Route 101 from Orchard Lane would be eliminated and rerouted.
- A modification of the existing southbound off-ramps from Route 101 at San Miguel Canyon Road to allow left-turn movements.
- A new interchange at Crazy Horse Canyon Road and Route 101. Echo Valley and Crazy Horse Canyon Roads would be realigned to connect with an overcrossing at Route 101.

- An extension of Moro Road parallel to the existing Route 101 alignment from 50 meters (164 feet) north of Oak Estates Drive to Oak Heights Drive for local access along the west side of Route 101.
- An access road for fire services connecting Shady Drive to the realigned Echo Valley Road.
- A cul-de-sac on Echo Valley Road at the existing Route 101 and Echo Valley Road intersection. Direct access to Route 101 from Echo Valley Road would be eliminated and redirected to the new Crazy Horse Canyon/Echo Valley Road Interchange.
- Concrete median barrier on Route 101 from the new Russell/Espinosa undercrossing through the Crazy Horse interchange closing all median barrier gaps and eliminating all left turns.
- Retaining walls as required to minimize impacts to area residents and natural resources.
- Utility relocations (e.g. underground natural gas pipes, cable, electricity, and telephone lines) would be required at several locations.
- Borrow/fill sites and construction staging areas would be required.

These proposed improvements are consistent with the number of lanes (four), and facility type identified in the Transportation Concept Report for Route 101. The estimated cost of the proposed project is \$251,781,000 (includes support costs).

2.2.3 Transportation System Management and Transportation Demand Management

The concept of Transportation System Management is about investigating possible changes to the transportation system that would increase the operational efficiency of the existing roadway; they are changes that increase the number of vehicle trips a roadway can carry without increasing the number of through lanes. Transportation Demand Management focuses on regional strategies for reducing the number of vehicle trips and vehicle miles traveled, as well as increasing vehicle occupancy.

High Occupancy Vehicle lanes, ramp metering, and other such transportation elements are considered as ways to maximize the use of the existing roadway, while reducing the costs and impacts associated with constructing additional lanes.

Evaluation of alternatives that are inclusive of multi-modal options, such as motorcycle, automobile, public and private transit, bicycle and pedestrian improvements, all as elements of a unified transportation system, expand the

traveler's transportation choices in terms of travel method, travel route, travel costs, and travel time.

A Transportation System Management/Transportation Demand Management alternative for the Prunedale Improvement Project would incorporate elements that promote more efficient use of the roadway and increase the number of vehicle trips the road can carry by minimizing at-grade access and turning movements that integrate slower accelerating or decelerating vehicles into highway mainstream traffic, such as the following:

- Auxiliary lanes at existing high volume interchanges that would allow slower-moving traffic to merge without disrupting the mainline traffic flow.
- Acceleration/deceleration lanes at high use at-grade intersections that do not have other access to the highway.
- Median barrier throughout the project area to prevent the left turns to and from the highway.
- Cul de sacs constructed at many at-grade intersections with Route 101 reducing the number of vehicles entering and leaving the highway at slower speeds.
- Bus turnouts relocated from the state highway to a local road to avoid the slower entry and exit from stops.

This Transportation System Management/Transportation Demand Management alternative would meet, to some degree, the purpose and need of the project with improvements to safety and traffic operations on Route 101. It would do nothing, however, to improve local circulation and the impacts of out-of-direction travel would be far greater than the proposed Build Alternative. All the elements of this Transportation System Management/Transportation Demand Management alternative and its benefits are either planned, constructed, or would be incorporated in the Build Alternative. In addition, the proposed Build Alternative includes new and modified interchanges that lessen the impacts of out-of-direction travel and maximizes the ability of vehicles to enter and leave the highway at highway speeds.

2.2.4 Identification of Preferred Alternative

After circulation of the Draft Environmental Impact Report/Environmental Assessment and review of the public and agency comments received during the public review process, the Build Alternative was selected as the preferred alternative because it addresses the primary purpose and need of the project by improving safety, operations, and local circulation.

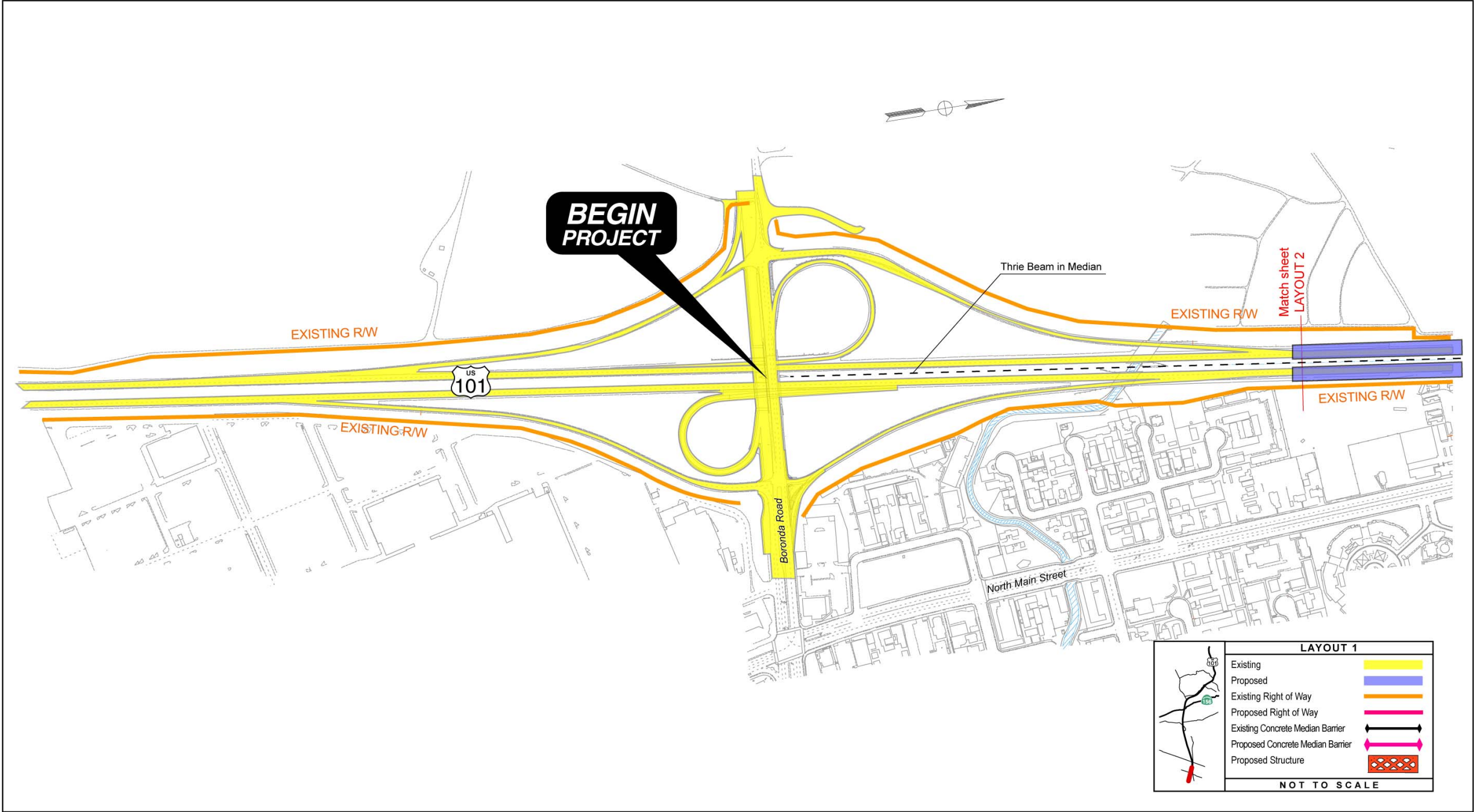


Figure 2-1 Build Alternative Design, Boronda Road Location
Revised October 2005 for final



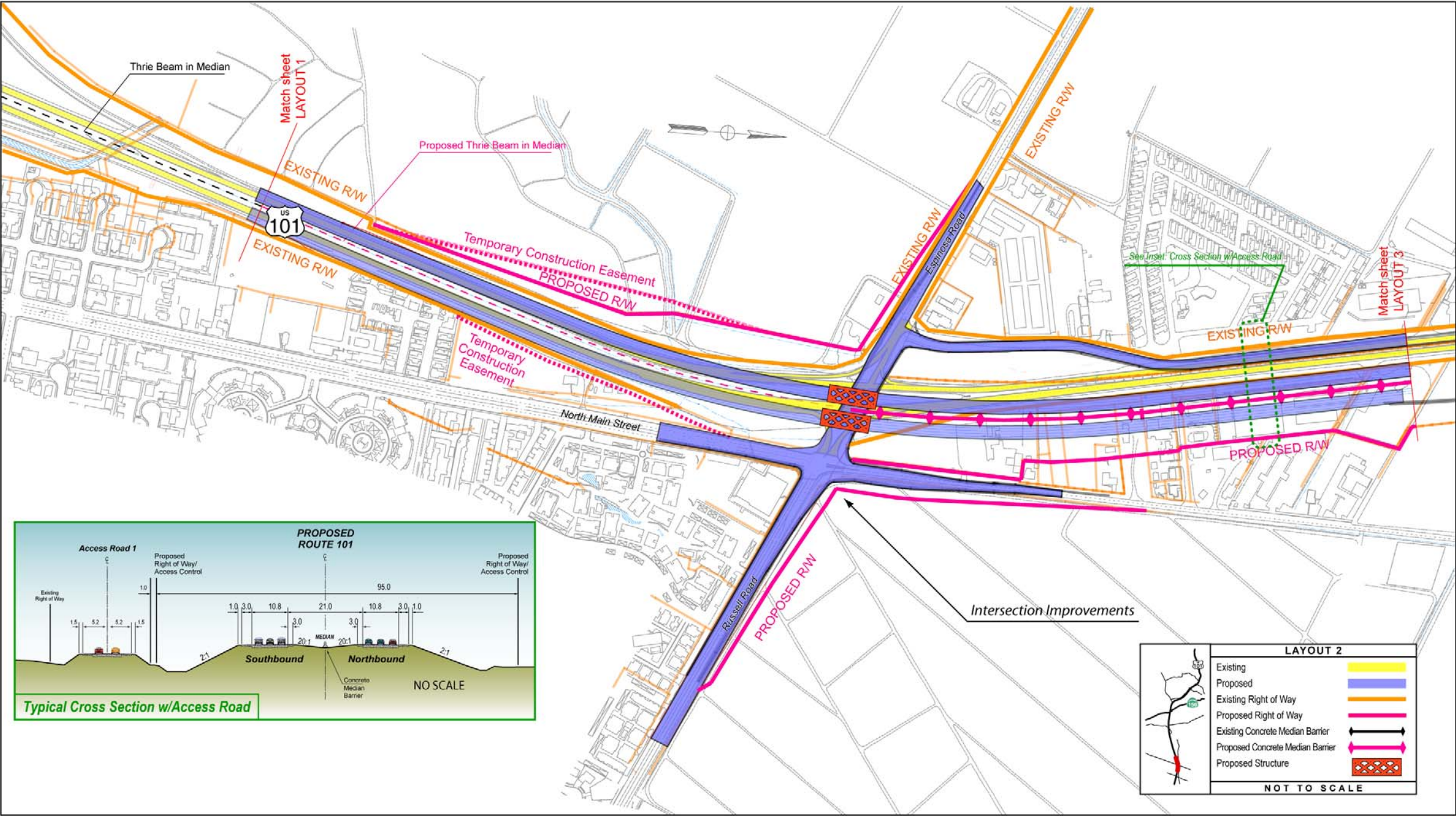


Figure 2-2 Build Alternative Design, Russell Road/Espinoza Road Location
Revised February 2006 for final



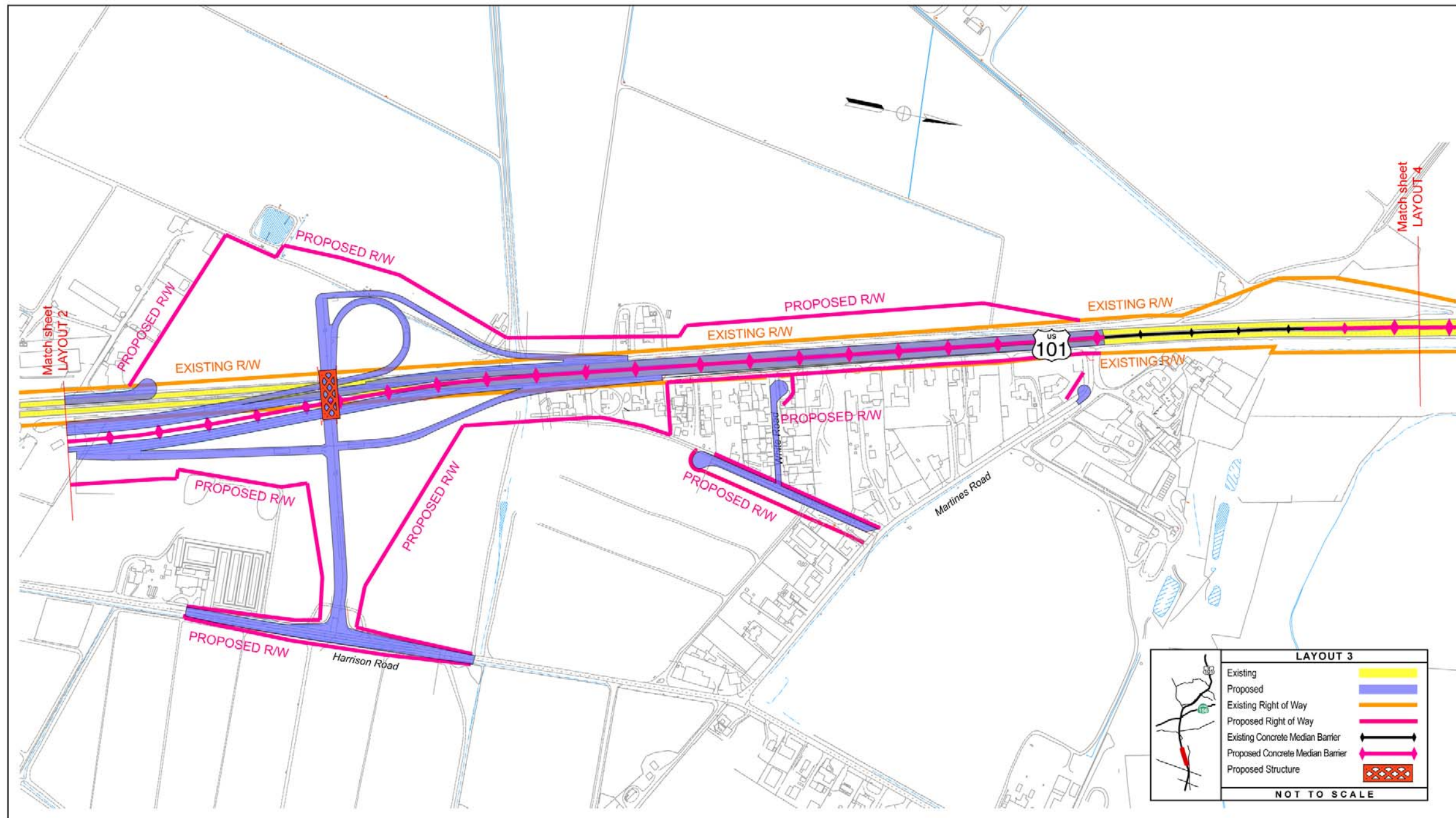


Figure 2-3 Build Alternative Design, Harrison/White Road Location

Revised February 2006 for final



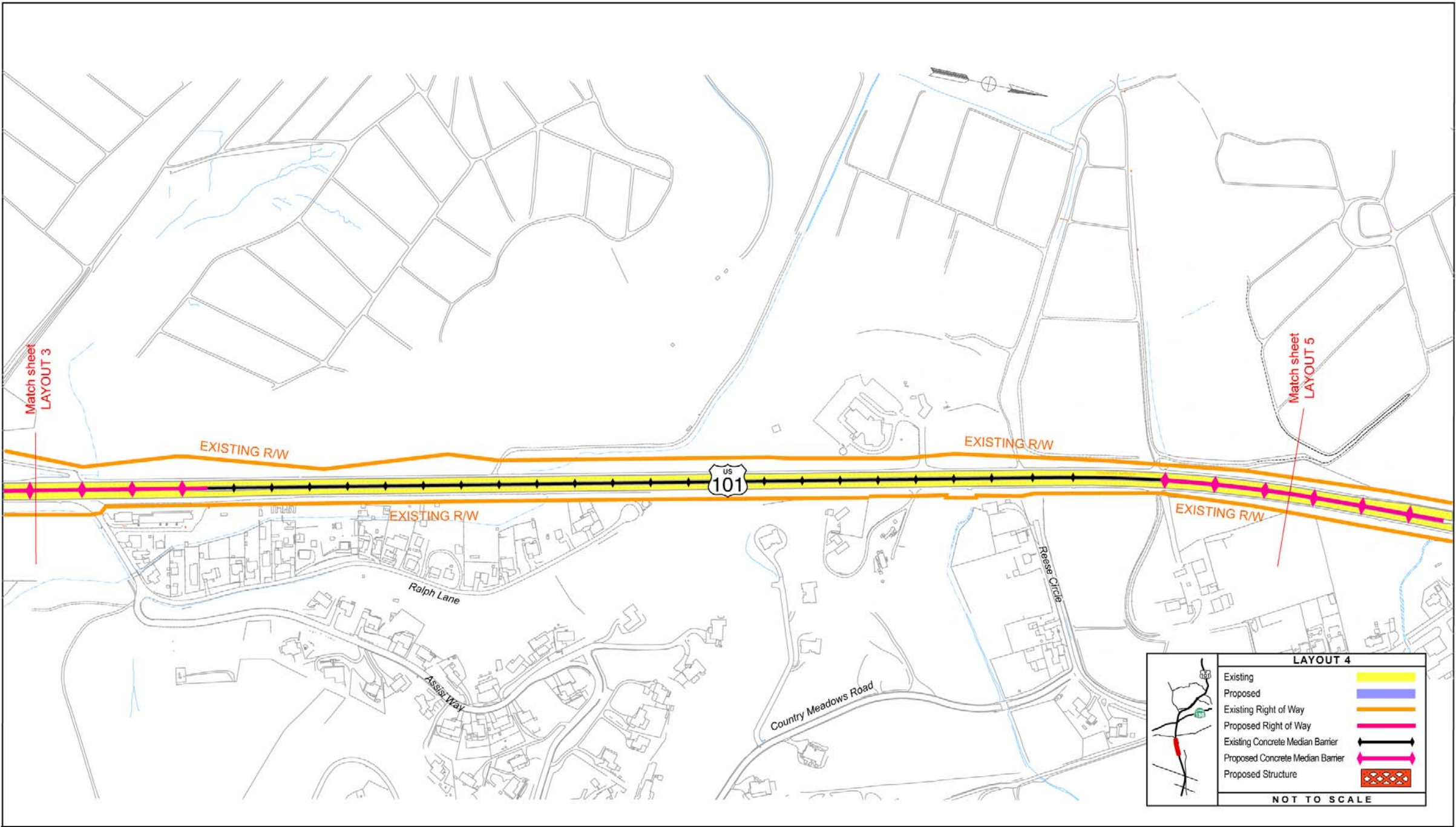


Figure 2-4 Build Alternative Design, Reese Circle/Ralph Lane Location
Revised February 2006 for final



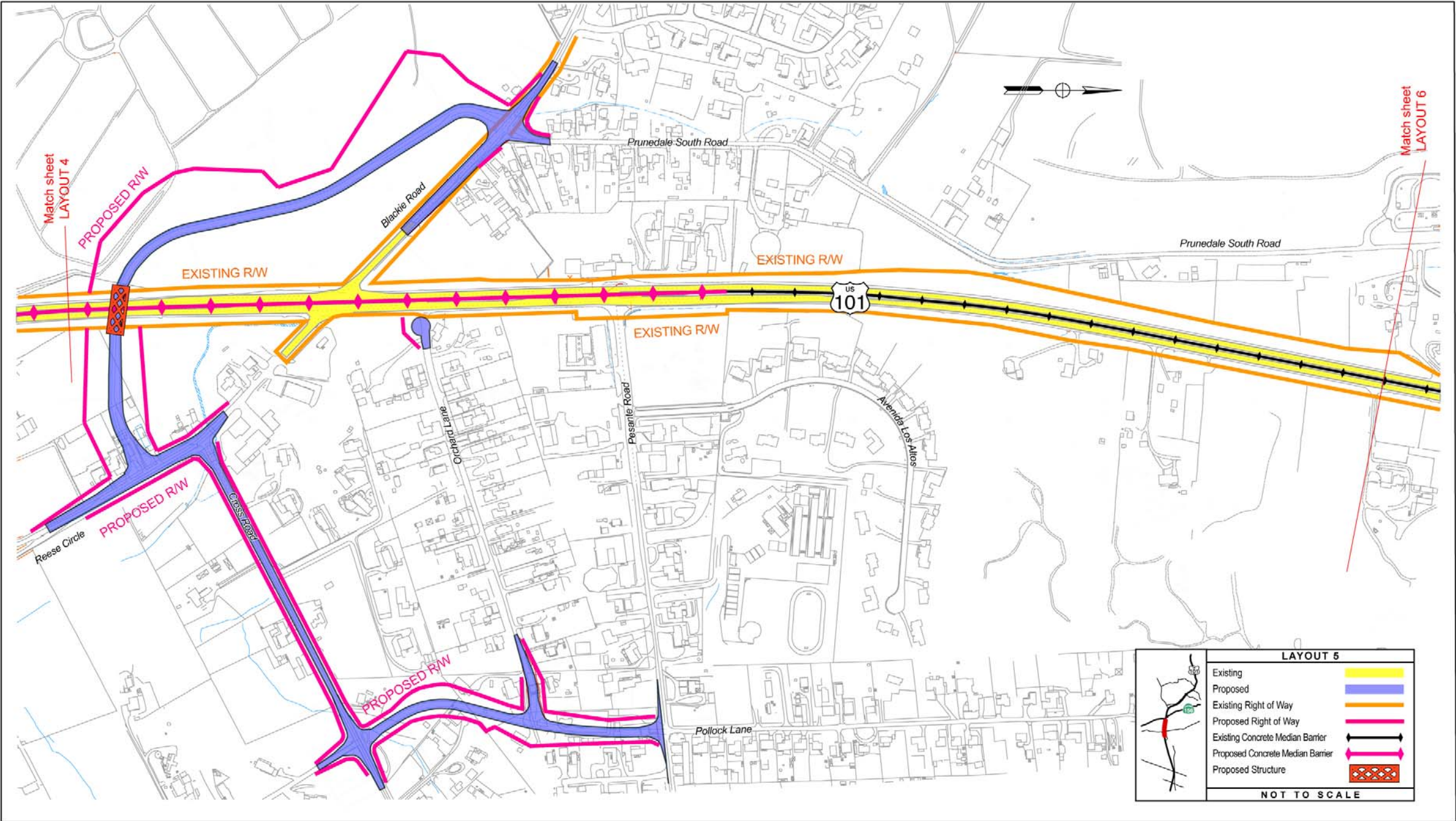


Figure 2-5 Build Alternative Design, Blackie Road/Reese Circle, Cross Road, and Pollock Lane Location
Revised February 2006 for final



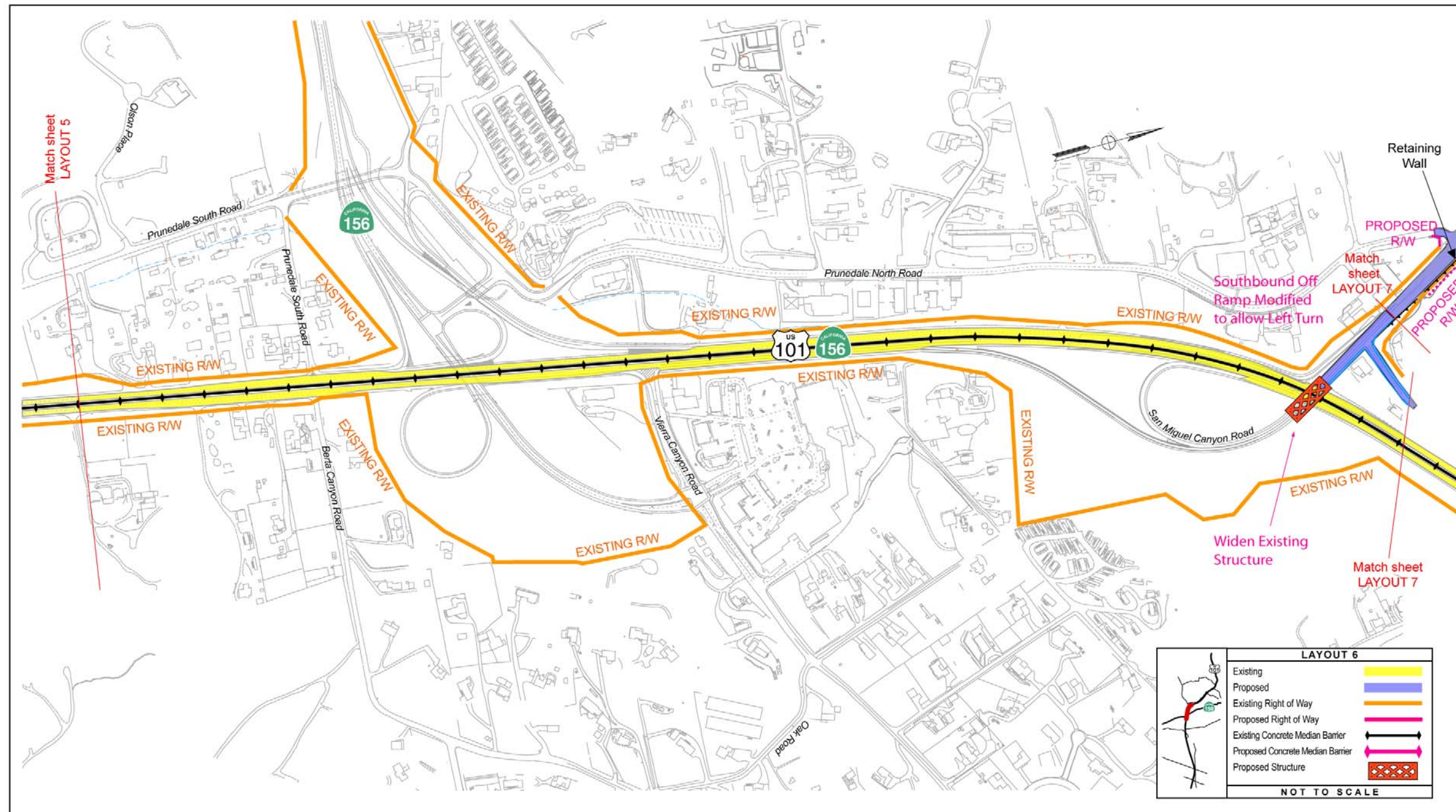


Figure 2-6 Build Alternative Design, Vierra Canyon Road/San Miguel Canyon Road Location
Revised February 2006 for final



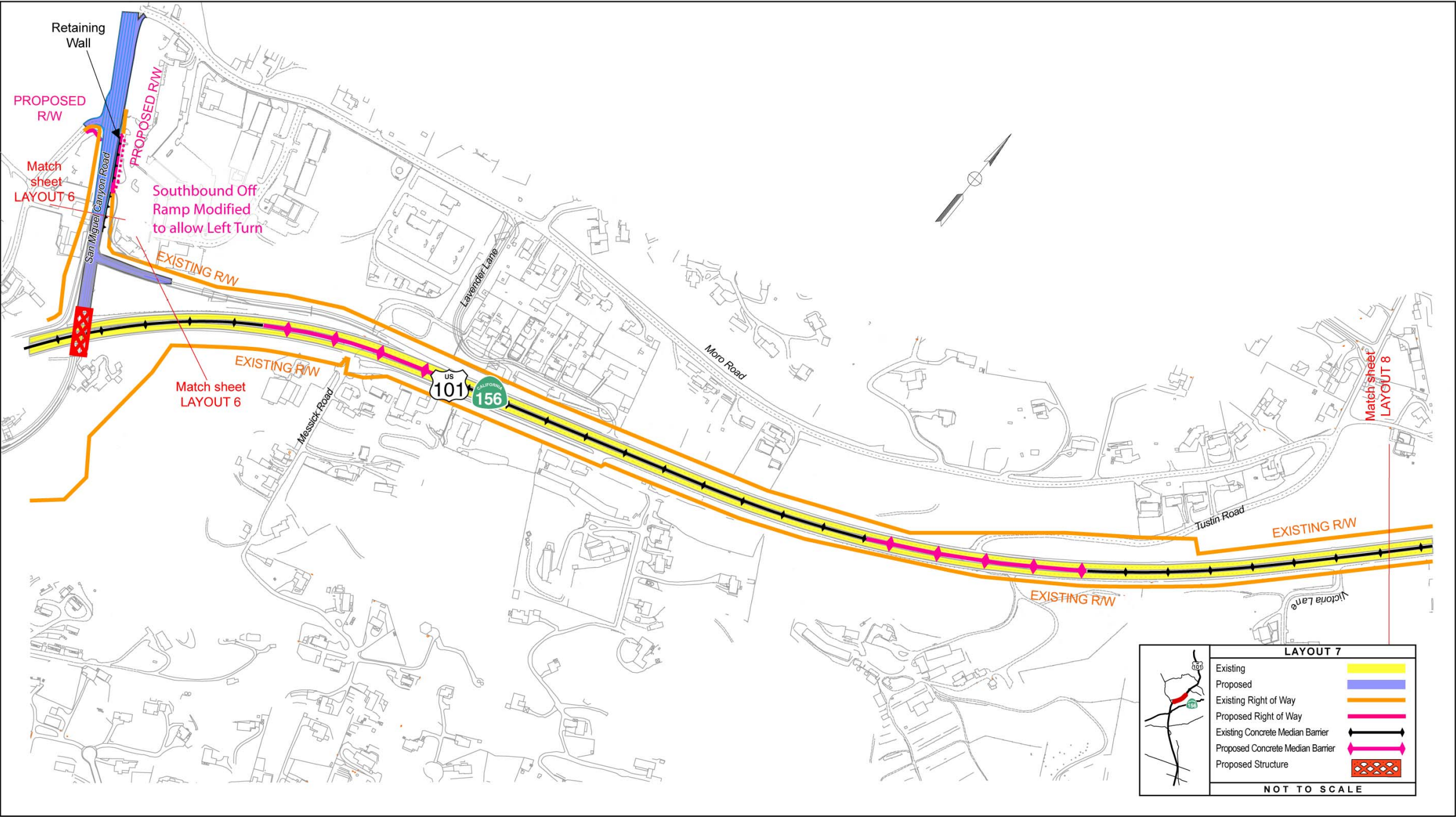


Figure 2-7 Build Alternative Design, San Miguel Canyon Road/Tustin Road Location
Revised February 2006 for final



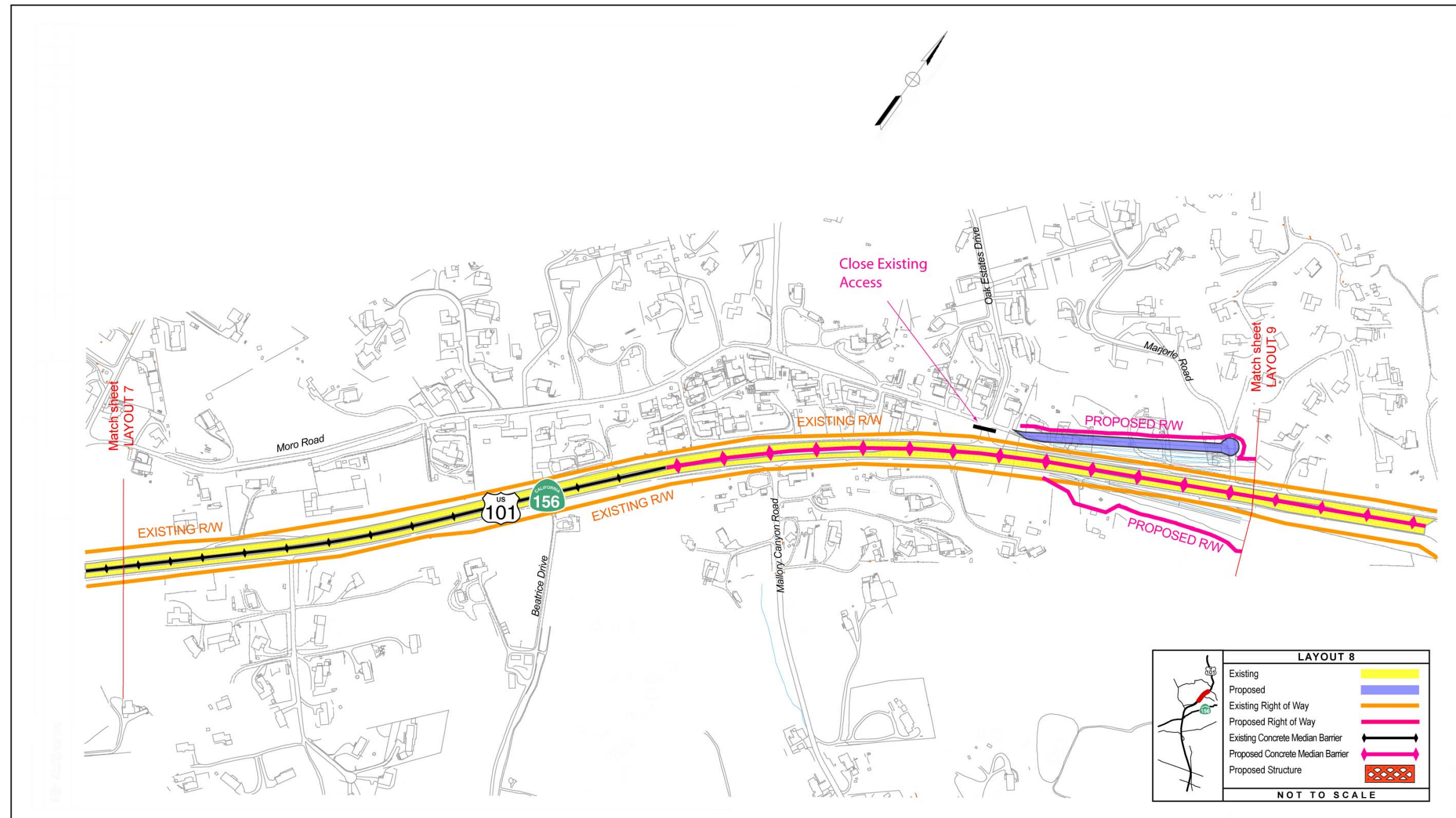


Figure 2-8 Build Alternative Design, Mallory Canyon Road Location
Revised February 2006 for final



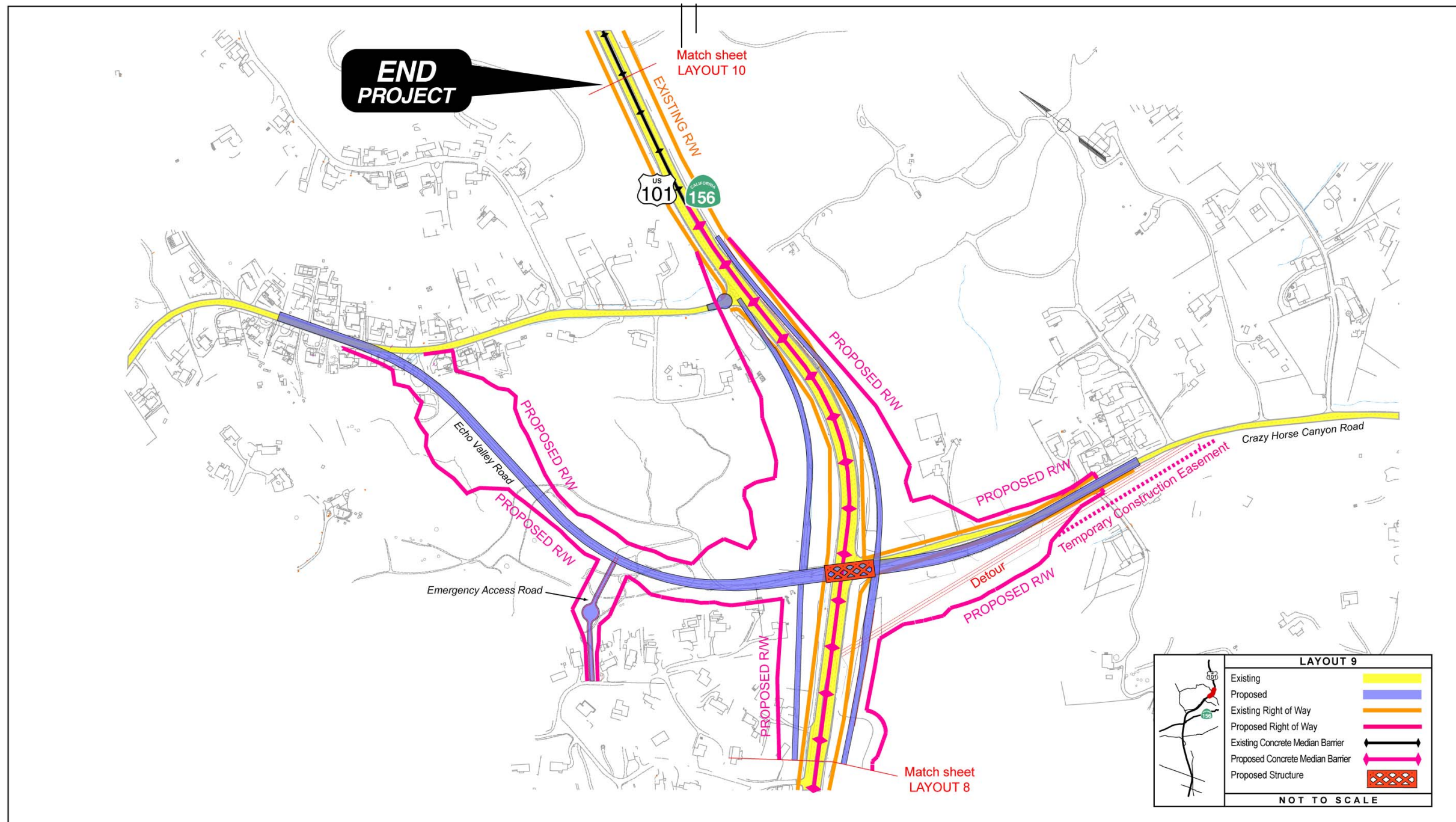


Figure 2-9 Build Alternative Design, Echo Valley Road Location

Revised February 2006 for final



2.3 Alternatives and Options Considered and Withdrawn

In 2002, Caltrans and the Transportation Agency of Monterey County recognized that funding was insufficient to implement a Route 101 alternative in the Prunedale area that used either an entirely new alignment or added lanes, and yet the safety issues on the existing highway needed to be addressed. Given the continuing operational and safety improvement needs, this project (the Prunedale Improvement Project) was initiated. The project team examined the operational and safety concerns within the project limits, and incorporated the improvements that best met the purpose and need of the project area: improving safety, operations, and local circulation. Individual areas of concerns were evaluated and removed, and included the following:

- The interchange at Echo/Crazy Horse was redesigned to minimize impacts to wetlands and to provide flexibility for use in future transportation projects. This alternative was withdrawn because an environmentally superior alternative was possible.
- An interchange was proposed at Russell/Espinosa Roads. The interchange was moved north 0.62 mile to minimize potential impacts to residences and businesses, and to meet state and federal highway guidelines that require one mile between urban interchanges. This alternative was withdrawn because an environmentally superior alternative was possible.
- At the south end of the project, a new Route 101 alignment west of the existing roadway was considered. To avoid the removal of residences and potential environmental justice impacts, the route was aligned to the east of the existing roadway. This alternative was withdrawn because an environmentally superior alternative was possible.
- Frontage roads were considered adjacent to the existing Route 101. Because of the potential impacts associated with the frontage roads (e.g., residential and business impacts, and potential farmland impacts), the focus turned to improving existing roads and enhancing local access. This alternative was withdrawn because an environmentally superior alternative was possible.
- A full standard design was considered, one with no features that would be non-standard, yet the cost of this alternative would be excessively higher and it would require a larger project impact area and therefore increase impacts to the environment. This alternative was withdrawn because an environmentally superior alternative was possible.

Permits and Approvals Needed

The following permits, reviews, certifications, and approvals would be required for project construction:

Agency	Permit/Approval	Status
United States Fish and Wildlife Service	Section 7 Consultation for Threatened and Endangered Species, issues Biological Opinion	Biological Assessment submitted, Biological Opinion issued. See Appendix F.
United States Army Corps of Engineers	Section 404 Permit for filling or dredging waters of the United States.	Application for Section 404 permit would be applied for after the project has been approved.
California Department of Fish and Game	1602 Agreement for Streambed Alteration	Application for 1602 permit submitted after the project has been approved.
California Water Resources Board	Section 401 Certification for Water Discharge Requirements	Caltrans has a statewide National Pollutant Discharge Elimination System permit that is always in affect. A Notification of Construction will be required.

Chapter 3 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

As part of the scoping and environmental analysis conducted for the project, the following environmental resources were considered, but no potential for adverse impacts to these resources was identified. Consequently, there is no further discussion regarding these resources in this document.

- Cultural Resources – Cultural resource studies conducted in compliance with Section 106 of the National Historic Preservation Act determined that no historic properties exist within the area of potential effects for the proposed Prunedale Improvement Project. The *Historic Property Survey Report* put forward a finding of No Historic Properties Affected. The State Historic Preservation Officer concurred with this finding on January 23, 2004 (see Office of Historic Preservation letters, Appendix E).
- Paleontology Resources – No temporary or permanent impacts to paleontological resources would occur with the proposed project because:
 1. The formations that occur in the project area are considered to have low or no potential for yielding sensitive paleontological resources.
 2. The largest fossil repositories in California have not reported any sensitive paleontological resources from the project area.
 3. Much of the project would be in previously disturbed soils or would involve fill.

This chapter describes the existing resources in the project area and identifies the likely impacts of implementing the proposed project. Each subsection below would describe the present conditions (Affected Environment), discuss the likely impacts of building the proposed project (Impacts), and indicate what measures would be taken to mitigate those impacts (Avoidance, Minimization, and/or Mitigation Measures).

Human Environment

3.1 Land Use

Throughout Monterey County and Prunedale, land use patterns appear to be largely driven by adverse commute patterns. Rather than a healthful mix of land uses, Monterey County has experienced a segregation of land use types simultaneously at three different scales. At the regional scale, the county provides more affordable housing for employees in Santa Clara County. At the countywide scale, smaller bedroom communities have developed in locations that are geographically distinct from local employment centers. Lastly, within Prunedale, conventional zoning has segregated residential uses from supporting land uses, such as retail, commercial, schools, and services. These dominant land use patterns necessitate use of private automobiles by most workers and residents, with few other transportation options.

3.1.1 Regulatory Setting

Although the State is not subject to regulation by the Monterey County General Plan, consistency in transportation planning and planned land use is the goal.

3.1.2 Consistency with State, Regional, and Local Plans

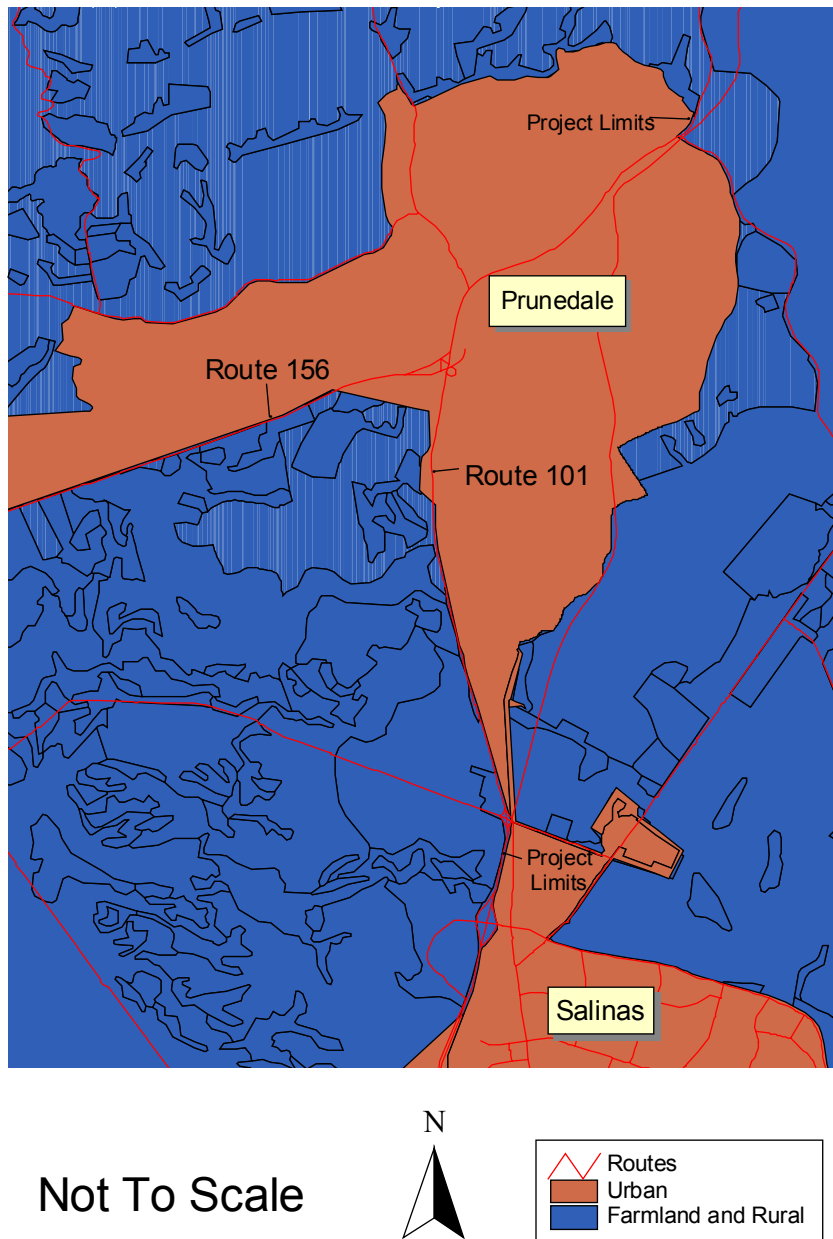
Development in the Prunedale area has been guided mainly by three plans: the 1982 Monterey County General Plan, the 1997 North County Area Plan, and the 2002 Monterey County Regional Transportation Plan. The following discusses how the proposed project is consistent with the existing and future land use plans for the Prunedale area.

1982 Monterey County General Plan

The 1982 Monterey County General Plan, though amended over the years, is outdated. Drafts of the new Monterey County 21st Century General Plan have been circulated for public review in 2001, 2003, and 2004. The updated General Plan is expected to be finalized and approved in 2006. Within the project limits, the approved 1982 Monterey County General Plan identifies Route 101 as deficient because of high collision rates. It states that development and circulation patterns need to be designed to maximize the use of local and collector roads for trips within the community, while consolidating access to principal arterial roads and highways for longer distance trips.

Figure 3-1 shows existing urban (which includes residential) and rural areas as determined by Caltrans from a variety of sources.

Land Use



Source: Caltrans

Figure 3-1 Current Land Use in Project Vicinity

1985 North County Area Plan

Within the project limits, the North County Area Plan identifies Route 101 as a segment of highway with increasing traffic congestion and driving conditions that can use improvement. It states that development and circulation patterns need to be designed to maximize the use of local and collector roads for trips within the community, while consolidating access to principal arterial roads and highways for longer distance trips. Furthermore, the plan acknowledges Caltrans' efforts to upgrade the existing route.

Between 1985 and 1996 the plan was amended several times, identifying 17 areas planned for land use conversions. Of the 17 parcels, 12 were subdivided and developed as residential, and five were converted to commercial.

Monterey County Regional Transportation Plan

The 2002 approved Monterey County Regional Transportation Plan identifies Route 101 through North County as a rural four-lane highway. The Plan describes Route 101 through the Prunedale area as congested as a result of considerable truck, inter-city, and inter-county traffic. At-grade intersections and driveways, and the lack of frontage roads for local traffic also affect the roadway's safety and efficiency. High volumes and numerous at-grade intersections with limited sight distance have made left turns to or from the expressway dangerous and difficult, according to the Monterey County Regional Transportation Plan.

Many of the improvements along Route 101 in the project area proposed in the 2002 report have been, or are planned to be implemented. Both the 2002 Regional Transportation Plan and the 2005 Regional Transportation Plan stress the need for widening Route 101 to six lanes between Crazy Horse Canyon/Echo Valley and Airport Boulevard in Salinas.

The 2005 Monterey County Regional Transportation Plan was approved by the Transportation Agency for Monterey County on May 25, 2005 and included the Prunedale Improvement Project. Monterey County projects are included in the Metropolitan Transportation Plan adopted by the Association of Monterey Bay Area Governments on June 8, 2005.

Plan Consistency Determination

The Prunedale Improvement Project is consistent with all current approved plans. Based on the increasing traffic congestion and safety concerns, and the county's past,

present, and future land use designation trends, the proposed project is also expected to be consistent with the Draft 2005 Regional Transportation Plan and consistent with the proposed 21st Century Monterey County General Plan, expected to be finalized in 2006.

3.1.3 Affected Environment

Within the North County Area Plan, approximately 13,031 hectares (32,202 acres) is agricultural and approximately 10,485 hectares (25,907 acres) is residential. Major residential centers are the unincorporated communities of Castroville, Moss Landing, Pajaro, Las Lomas, Aromas, and Prunedale. Approximately 656 hectares (1,620 acres) of land is considered commercial and industrial. Commercial and industrial land uses are concentrated in Castroville, Prunedale, Pajaro, and Moss Landing.

Existing Land Use Along Route 101

The project would include facility upgrades along the existing Route 101 alignment. Table 3.1 shows the existing land use along Route 101.

Table 3.1 Existing Land Use Adjacent to Route 101

Location	Residential	Commercial and Industrial	Agricultural
North of Russell/ Espinosa Road	Mobile home park, single-family housing and lots	Mini-storage facility, Towing and transportation operations, Camper sales, Roofing operation, Commercial building sales, Service and retail	Truck crops
South of Russell/ Espinosa Road	Condominiums, multifamily lots, single-family housing and lots	Retail center-Northridge Shopping Center	NA
North of Martines Road	Single-family housing and lots	NA	Dairy
South of Martines Road	Single-family housing and lots; Multi-family lots	Trucking Co	Truck crops
North of Blackie Road/Reese Circle Road	Single-family housing and lots; North County Fire District office; Continuation school, churches	Auto body and painting operation; North Monterey County School District bus maintenance yard	NA
South of Blackie Road/Reese Circle	Single-family housing and lots	Auto repair operation, Veterinary clinic	Grazing land, pasture
North of Route 156 and Vierra Canyon Road	Single-family housing and lots, Senior Center, Church, Private schools	Offices, Retail center - Prunetree Shopping Center, Service stations/mini marts	NA

Table 3.1 continued

Location	Residential	Commercial and Industrial	Agricultural
South of Route 156 and Vierra Canyon Road	Single-family housing and lots	Construction grading and paving operation, Veterinary clinic	NA
North of San Miguel Canyon Road	Single-family housing and lots	Medical clinic, Offices, Retail center-Prunedale Shopping Center, Auto wrecking operation, Lumber yard, Auto repair operation	NA
South of San Miguel Canyon Road	Single-family housing and lots Manzanita Regional Park	Retail Center, Offices-Prunedale Plaza	NA
North of Echo Valley/Crazy Horse Canyon Road	Single-family housing and lots	NA	NA
South of Echo Valley/Crazy Horse Canyon Road	Single-family housing and lots	NA	NA

Source: Community Impact Assessment, March 2004

Development Trends

The Monterey County North County Area Plan outlines developable land and development trends for the North County Planning Area and the project study area. The holding capacity for these areas is the sum of existing development and potential development allowable under current land use regulations. Development in North County is regulated by the Monterey County Land Use Plan and the Local Coastal Program. As of 1985, there were approximately 24,353 hectares (60,177 acres) of land in North County designated for residential, agricultural, or resource conservation. The County estimates that the 1985 holding capacity for the North County Area was 21,176 homes. This would allow for the construction of 12,956 new housing units (North County Area Plan, 1985). There were also approximately 111 hectares (274 acres) of commercial and 182 hectares (449 acres) of industrial land available for development as of 1985.

Development trends for North County are determined by the land use plan. Rural residential uses (one unit per five acres) are planned for three areas in Prunedale. The first is north of the coastal zone boundary on both sides of San Miguel Canyon Road and extending east to San Juan Road. The next area is in the vicinity of the Highway 101/San Juan Road/Dunbarton Road intersections. The third area includes a large segment of land adjacent to Crazy Horse Canyon Road.

The North County Area Plan has three separate classifications for low-density residential land (one acre per unit). Low-density residential is designated primarily along portions of San Miguel Canyon (east side), Pesante Road, and Reese Circle (north side). One-hectare (two-and-one-half-acre) low-density development designations exist along much of Vierra and Berta Canyons. Five-acre residential lots are designated between San Miguel Canyon Road and the coastal zone near Prunedale, and south of Pesante Road and Reese Circle.

The North County Area Plan provides for existing commercial centers to be the foundation for expanding commercial development. Existing commercial land within the study area is located in the center of Prunedale near Route 101 and San Miguel Canyon, Vierra Canyon, and Messick roads. Land zoned for industrial uses in the study area is confined to two existing industrial operations on Crazy Horse Canyon Road.

Within the project limits, the area south of Pesante all the way to the Salinas City Limits is designated as agriculture. In addition, public and quasi-public land is confined to Manzanita Park near San Miguel Canyon Road and solid waste disposal sites on Lewis Road and Crazy Horse Canyon Road.

A development known as Rancho San Juan Specific Plan and HYH Property has been proposed between Salinas and Prunedale, east of Route 101. The 2,581 acres originally proposed for development was a larger area than the current 671 acres proposed, which would provide 1,147 residential units distributed over a variety of unit types and sizes, many affordable to low- and moderate-income families. The plan also includes a mixed-use town center and town square with 45,000 square feet of retail commercial space. Recreational facilities include an 18-hole golf course, with 71 guest villas/timeshares, a wastewater treatment plant, 11.8 acres of parks, 367.7 acres of conservation and common open space, and fire and sheriff stations.

Primary access to the development would be from the east side via Stirling Road, with the west side access being via Harrison Road. The project is proposed to include construction of Stirling Road from its eastern junction with San Juan Grade Road, a distance of approximately 3,400 feet.

The Rancho San Juan project was originally approved by the Monterey County Board of Supervisors in December 2004. However, numerous lawsuits have been filed challenging the Board's approval. Consequently, at the time of this environmental

document, the Rancho San Juan project is subject to considerable uncertainty. Nevertheless, the future traffic projections in this environmental document are based, on the assumption that the Rancho San Juan project will be developed as currently proposed.

3.1.4 Impacts

The proposed project would require acquisition of property currently zoned as low-density residential, agricultural, commercial, and industrial. This acquisition would include land adjacent to the existing alignment, areas needed for construction of the interchanges and ramps, and land for local road modifications and drainage basin construction (refer to Section 3.4 for additional detail).

No land would be acquired with the No-Build Alternative and land use would continue as currently zoned.

3.1.5 Avoidance, Minimization, and/or Mitigation Measures

Mitigation measures would not be anticipated.

3.2 Growth

Growth, traffic circulation, and safety have been a concern in the region for many decades, with planning for a Route 101 bypass of Prunedale first beginning in the early 1960s. The north county's population grew from 20,093 in 1970 to 37,624 in 2000, and is expected to increase to 48,145 by 2020. This population growth, combined with increased traveler commutes and dispersed zoning patterns, appears to be the cause of the project area's over-burdened road system.

3.2.1 Regulatory Setting

The Council on Environmental Quality regulations, which implement the National Environmental Policy Act of 1969, require evaluation of the potential environmental consequences of all proposed federal activities and programs. This provision includes a requirement to examine indirect consequences, which may occur in areas beyond the immediate influence of a proposed action and at some time in the future. Secondary impacts may include changes in land use, economic vitality, and population density, which are all elements of growth.

The California Environmental Quality Act requires the analysis of a project's potential to induce growth. California Environmental Quality Act guidelines, Section 15126.2(d), require that environmental documents "...discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment..."

3.2.2 Affected Environment

Prunedale and the North Monterey County region have experienced an increase in land use conversions and in traffic/safety concerns over the years. Since 1982, when the North County Area Plan was developed, residential land use designation has increased by 10,000 hectares (24,711 acres), planned commercial areas have tripled in size, and industrial land use has doubled. This growth has had an effect on local and interregional roads.

The congested traffic conditions that exist on many of the county's roads and highways appear to have their origin in several sources. The first source is that the local roads were designed to serve fundamentally rural demands, but now serve high traffic volumes. Second, due to housing costs and lack of housing, residents have to commute to work both within the county and to other counties. Third, one of the most important causes of overcrowded roads appears to be related to the type of developments that have been approved. Within the project area, conventional subdivisions tend to be purely residential in character and exclude a mix of complementary land uses such as schools, retail shopping, employment centers, and other community serving uses. This zoning strategy makes trips outside the subdivision necessary for almost every need on a daily basis.

As described in Section 3.1, Land Use, the Monterey County North County Area Plan outlines developable land and development trends for the North County Planning Area and the project study area. The holding capacity for these areas is the sum of existing development and potential development allowable under current land use regulations. Development in North County is regulated by the Monterey County Land Use Plan and the Local Coastal Program.

3.2.3 Impacts

Growth inducement can occur when a specific project provides access to previously inaccessible locations. This access could put growth pressure on the land. In addition to access to land, growth pressure could occur if a project substantially reduces

traveler commute times. This project does not provide new access such as a new interchange requiring new connecting streets or a new alignment through an undeveloped area. Nor does the project substantially reduce commute times. In fact for some residents, additional minutes are added due to out-of-direction travel.

There is an open question as to whether improved access in an area where there is existing access can lead to growth inducement. Some studies have shown that people make choices about where to live and work independent of a lack of traffic congestion in corridors that they will use. Furthermore, growth can only occur if permitted by local agencies through the general planning process, as well as the specific development approvals.

In April 2001, a growth inducement study was conducted for the Prunedale Freeway Project (Prunedale Growth Inducement Research, 2001). For the purposes of this analysis, data was used for the growth study from Alternative 2. Alternative 2 proposed to upgrade existing Route 101 into a six-lane freeway. Similar to the Prunedale Improvement Project, Alternative 2 proposed constructing new interchanges at Russell/Espinosa Roads, Blackie Road/Reese Circle, and Crazy Horse Canyon Roads, as well as closing several access points onto Route 101 from existing driveways and local roads. In addition to using the Prunedale Growth Inducement Research Study, a Caltrans Transportation Planner was interviewed to determine the proposed developments (based on the 2005 Draft Monterey General Plan) within the project area.

The Prunedale Growth Inducement Research Study was based on an analysis of travel time from job centers to areas subject to residential growth pressure. For this project, travel time is a key component for growth analysis due to driver behavior. For example, Prunedale real estate is less expensive than real estate in the San Jose or Monterey Peninsula areas. Given this, individuals may have to commute to the Prunedale area for affordable housing. If this project were to substantially reduce travel times from job-rich areas, growth pressure could increase.

Within the project limits three areas were identified as areas for potential growth: North, Central, and South Prunedale. In addition, several potential employment centers outside of Prunedale were identified as possible daily commute destinations: Seaside, Salinas, San Juan Bautista, Gilroy, Santa Cruz, Sunnyvale, Milpitas, Campbell, and Coyote Valley. Traffic engineers updated average travel times to and

from these locations based on the proposed project and current traffic volume information.

The Growth Model took average travel times between each area in Prunedale and potential job centers. For example, when comparing the build versus no-build alternatives for the Prunedale Improvement Project, a typical commuter would save 0.0 minutes when traveling between Gilroy and South Prunedale (Table 3.2). In comparison, the 2001 Prunedale Growth Inducement Research Study indicated that Alternative 2 of the Prunedale Freeway project would save a typical commuter only 30 seconds in travel time compared to the No-Build Alternative. The data in Table 3.2 indicates that overall travel time saving for the Prunedale Improvement Project would be minor when compared to the No-Build Alternative. This suggests that the savings in travel time would not be enough to lead to growth in the Prunedale area. Furthermore, since this project is not capacity increasing (safety and operational improvements only), the Level of Service experienced on Route 101 should remain constant.

Table 3.2 Growth Model Travel Times (AM and PM)

Employment Centers (AM)	North Prunedale (time in minutes)		Central Prunedale (time in minutes)		South Prunedale (time in minutes)	
	No-Build	Build	No-Build	Build	No-Build	Build
Gilroy	22.2	23.1	23.3	23.3	22.8	22.8
Watsonville	17.6	17.6	18.7	18.8	19.9	20.0
Santa Cruz	40.5	40.2	41.6	41.4	42.8	42.6
Hollister Area	24.2	25.2	25.3	25.3	24.8	24.8
Castroville	11.5	11.2	8.4	8.4	8.0	8.1
Rancho San Juan	10.5	11.1	7.5	7.9	4.5	4.5
NE Salinas	12.2	12.2	9.2	9.2	7.2	8.0
SE Salinas	18.1	18.0	15.1	15.0	13.0	13.8
Central Salinas	14.2	14.2	11.2	11.2	9.2	9.9
SW Salinas	15.5	15.4	12.5	12.4	10.4	11.1
Monterey	33.5	33.5	30.4	30.4	30.0	30.2
Employment Centers (PM)	North Prunedale (time in minutes)		Central Prunedale (time in minutes)		South Prunedale (time in minutes)	
	No-Build	Build	No-Build	Build	No-Build	Build
Gilroy	23.1	24.0	24.3	24.3	23.9	23.9
Watsonville	15.8	15.8	16.9	17.0	18.2	18.3
Santa Cruz	35.6	35.6	36.8	36.8	38.0	38.1
Hollister Area	27.9	29.0	29.1	29.3	28.7	28.9
Castroville	11.5	11.5	8.4	8.4	8.0	8.1
Rancho San Juan	10.7	11.5	7.6	7.9	4.5	4.5
NE Salinas	13.7	13.2	10.6	10.1	8.4	8.8
SE Salinas	18.9	18.6	15.8	15.5	13.6	14.1
Central Salinas	15.0	14.7	11.9	11.6	9.7	10.3
SW Salinas	16.3	16.0	13.2	12.8	11.0	11.5
Monterey	31.7	31.7	28.6	28.6	28.2	28.4

According to the 2005 Draft Monterey County General Plan, the following areas have been identified for development:

- Rancho San Juan development is located northeast of the Russell Road/Espinosa Road/Route 101 intersection. The fully developed 671-acre site would provide 1,147 residential units distributed over a variety of unit types and sizes, many affordable to low- and moderate-income families. The plan also includes a mixed-use town center and town square with recreational facilities that include an 18-hole golf course, with 71 guest villas/timeshares, a wastewater treatment plant, 11.8 acres of parks, 367.7 acres of conservation and common open space, and fire and sheriff stations.

- Several areas adjacent to the project limits are zoned commercial and residential, but are currently undeveloped. The general plan has approved those vacant lots for commercial and residential in-fill.
- In addition, the Salinas General Plan identifies an 853-unit residential development located five miles southeast of the intersection of Boronda Road and Route 101.

Given that areas have already been identified for development, this project would be part of the planning process and not the catalyst for unplanned growth.

The Growth Model study indicates that, due to current land use planning and the fact that North and Central Prunedale are considered “built out” by those representing the community, growth pressure would not increase in these areas. The study also suggests that commuter time reductions would be minimal. Therefore, no substantial change in long-distance commuter patterns would be expected. Growth in Prunedale would continue to be guided by local and regional land use plans (see Section 3.1, Land Use).

The project will not have a substantial growth inducement impact.

With the No-Build Alternative, growth pressure on undeveloped land would continue to be strong, as with the proposed project, guided by local and regional land use plans.

3.3 Farmlands/Agricultural Lands

Agriculture, consisting of crop farming and livestock grazing, is the largest industry in Monterey County. The number of acres of land dedicated to agriculture has remained stable. According to the California Department of Conservation’s Farmland Mapping and Monitoring Program, 528,376 hectares (1,305,631 acres) of land was dedicated to agriculture in 1992, decreasing slightly to 525,409 hectares (1,298,301 acres) in 2002, an approximately ½ percent drop.

3.3.1 Regulatory Setting

The National Environmental Policy Act and the Farmland Protection Policy Act (USC 4201-4209; and its regulations, 7 CFR Ch. VI Part 658) require federal

agencies, such as the Federal Highway Administration, to coordinate with the Natural Resources Conservation Service if their activities may irreversibly convert farmland (directly or indirectly) to nonagricultural use. For purposes of the Farmland Protection Policy Act, farmland includes prime farmland, unique farmland, and land of statewide or local importance. The land does not currently have to be used for cropland. It can be forestland, pastureland, cropland, or other land, but not water or urban developed land.

The California Environmental Quality Act requires the review of projects that would convert Williamson Act contract land to non-agricultural uses. The main purposes of the Williamson Act are to preserve agricultural land and to encourage open space preservation and efficient urban growth. The Williamson Act provides incentives to landowners through reduced property taxes to deter the early conversion of agricultural and open space lands to other uses.

In Monterey County, the Williamson Act contract term is 20 years, with automatic renewal each year unless the owner(s) files a notice of non-renewal with the County Board of Supervisors. There are two requirements that must be met to qualify for the Williamson Act contract: one is the owner(s) should have a minimum of 100 acres (40 acres if prime farmland); two, the gross agricultural income must be at least \$8,000 per year for three of the last five years. To meet the minimum acreage, property owners can combine efforts and apply together to qualify.

3.3.2 Affected Environment

Agriculture represents over 40 percent of Monterey County's total economy and has made it the number one vegetable-producing region in the nation. Monterey County supplies 80 percent of the nation's lettuces and nearly the same percentage of artichokes, in addition to other vegetables. Monterey County has become one of the largest premium grape-growing regions in California, with 16,188 hectares (40,000 acres) of wine grapes. Monterey County crop production and value-added agricultural products exceed a value of \$10-\$12 billion per year (Prunedale Improvement Project Community Impact Assessment, March 2004, updated September 2005).

Of the farmland in Monterey County, at present 308,483 hectares (762,279 acres) are under Williamson Act contract, of which 34,533 hectares (85,333 acres) are prime farmland. The 21st Century Monterey County General Plan now in revision is anticipated to include policies to protect agricultural operations. The State is not subject to regulation by the local General Plan.

3.3.3 Impacts

The Natural Resource Conservation Service determined that of the total 37.64 hectares (93 acres) of farmland that would be converted for the project, 15.7 hectares (38.8 acres) are prime and unique, and 2.3 hectares (5.6 acres) are of statewide or local importance. The 37.64 hectares (93 acres) to be converted would be 0.0001 percent of the total county farmland (see Figure 3-3).

The proposed project scored 138 out of 260 points on the Farmland Conversion Impact Rating (see Appendix D). Under the national Farmland Protection Policy Act, a score of at least 160 points is necessary to indicate substantial farmland impacts. This score is reported on a Farmland Conversion Impact Rating (Form AD-1006) that has been filled out and submitted to the USDA Natural Resources Conservation Service in Salinas. This form is to be used by federal agencies or for federally funded projects that may convert farmland, as defined in the Farmland Protection Policy Act, to nonagricultural uses.

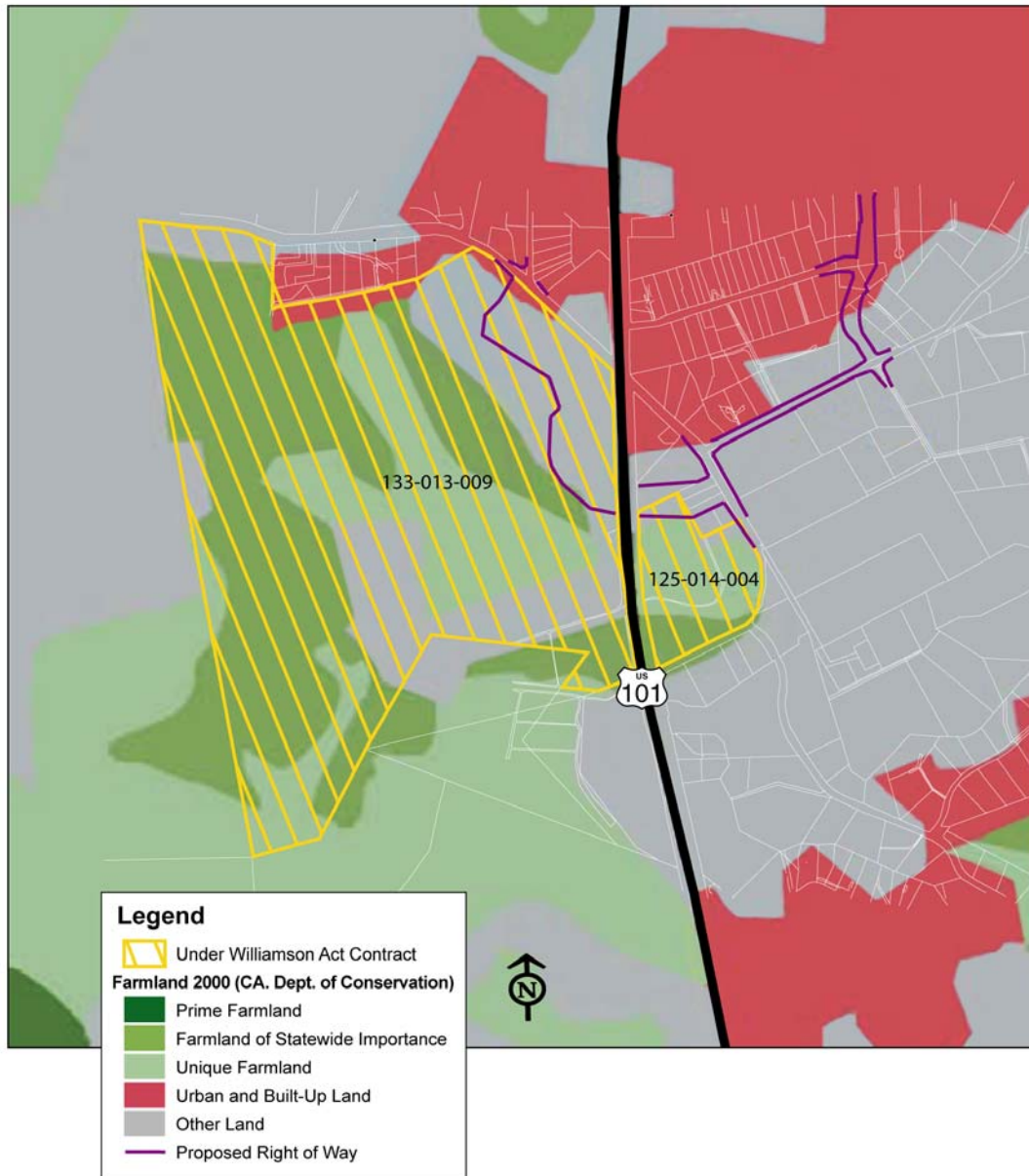
As stated in Section 3.3.1, Williamson Act contract land preserves agricultural and open space land by the county providing incentives to landowners through reduced property taxes to deter the early conversion of agricultural and open space lands to other uses.

Two parcels, one 234.71 acres and the other 22.50 acres, that are under Williamson Act contract, will be impacted by this proposed project (see Figure 3-2). Of this total 257.21, only 23.6 acres will need to be acquired for this project.

Although this will result in the loss of 9.55 hectares (23.6 acres) of Williamson Act contract farmland, this will not threaten termination of the contracts these parcels are under or adjacent parcel contracts. Monterey County has confirmed that neither parcel would be reduced below the minimum contract requirements; therefore, neither contract would be prematurely terminated as a result of this project.

No farmland would be converted for transportation use under the No-Build Alternative.

Williamson Act Contract Conversions



Note: Figure revised for final document

Figure 3-2 Williamson Act Contract Land Conversion

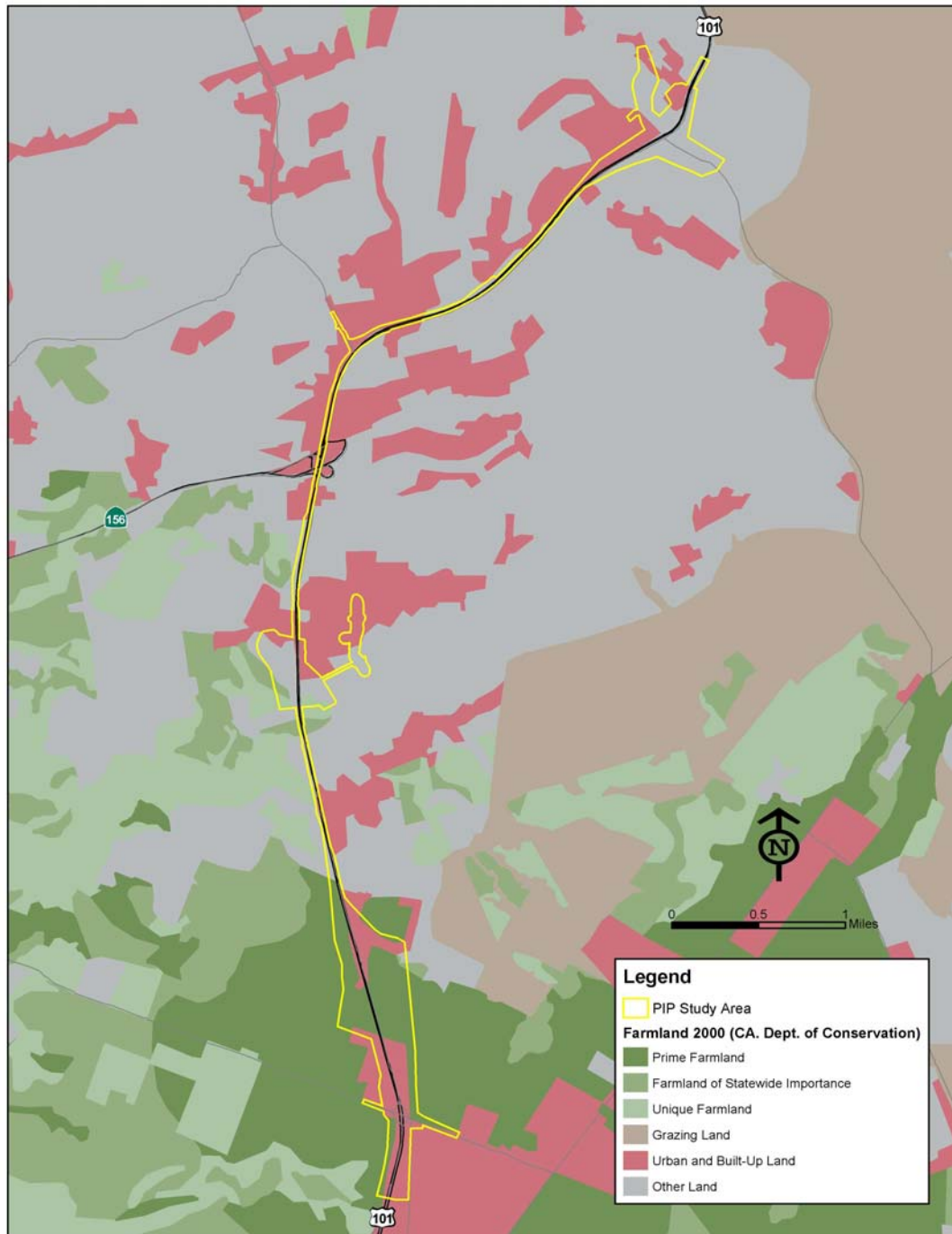


Figure 3-3 Farmland

3.3.4 Cumulative Impacts

Five reasonably foreseeable transportation projects and two other developments in the project area are in early planning stages. Three of the transportation projects are anticipated to require an Environmental Impact Report/Environmental Impact Statement with disclosure of all impacts and alternatives development, and two will result in little to no change in land use. An expansion of Hartnell College and a mixed-use development referred to as Rancho San Juan are both likely to result in some conversion of farmland and both will require full disclosure through the Environmental Impact Report process.

Seven transportation projects in the project area are currently in or entering construction. No conversion of farmland will occur with any of these seven projects.

There are 10 other active developments in the area, including one 19.35-hectare (47.81-acre) subdivision that will require full disclosure of impacts through the Environmental Impact Report process. Of the remaining nine projects, four will leave the existing land use unchanged, three are consistent with the existing commercial zoning, and two are rural residential development.

The Prunedale Improvement Project would convert about 48.97 hectares (121 acres) of commercial, residential, and agricultural land use to transportation uses. Approximately 77 percent of the acreage is in agricultural use and 23 percent is in commercial and residential uses.

According to the California Department of Conservation Farmland Mapping and Monitoring Program, approximately 525,409 hectares (1,298,301 acres) of land were dedicated to agriculture in 2002 in Monterey County. In the ten-year period between 1992 and 2002, Monterey County approved the conversion of about three percent of prime farmland to urban development and non-agricultural uses. Over the same period, this loss was partially offset by conversion of more than two percent of grazing land to farmland, primarily planted to wine grapes. Monterey County's farmland represents only one percent of the farmland in California, but produces 10 percent of the state's farm income. Farmers are able to produce higher yields on less land by using more efficient agricultural practices.

Land use conversions from current and future projects mentioned in this analysis have undergone evaluation or would be independently evaluated based on land use guidelines stipulated in local general plans and state and federal law. Active non-

transportation projects undergo permit application review by the Monterey County Planning and Building Inspection Department for zoning compliance. Approval is based on compatible land use according to zoning for properties.

Based on the conversion of agricultural land to non-agricultural uses in Monterey County, and the zoning approval process for land use compliance for future and current development in Monterey County, the Prunedale Improvement Project is not expected to contribute to a cumulative effect.

3.3.5 Avoidance, Minimization, and/or Mitigation Measures

When designing the project, engineers avoided and minimized impacts to farmland by proposing a design that would require the smallest possible project footprint. The Farmland Conversion Impact Rating point total for the project was 138, with 15.7 hectares (38.8 acres) of prime and unique farmland being converted. This indicates that farmland impacts are not substantial and that mitigation would not be required.

3.4 Community Impacts

A project's effect on a community can occur through business and residential relocations, change in community character, and the disproportionate effects on low-income or minority individuals.

3.4.1 Relocations

Residential or business relocations could occur if a transportation project has a footprint that requires new right-of-way.

3.4.1.1 Regulatory Setting

The National Environmental Policy Act of 1969 as amended, established that the federal government use all practicable means to ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings [42 U.S.C. 4331(b)(2)]. The Federal Highway Administration in its implementation of the National Environmental Policy Act [23 U.S.C. 109(h)] directs that final decisions regarding projects are to be made in the best overall public interest. This requires taking into account adverse environmental impacts, such as destruction or disruption of human-made resources, community cohesion, and the availability of public facilities and services.

Under the California Environmental Quality Act, an economic or social change by itself is not to be considered a significant effect on the environment. However, if a social or economic change is related to a physical change, then social or economic change may be considered in determining whether the physical change is significant. Since this project would result in physical change to the environment, it is appropriate to consider changes to community character and cohesion in assessing the significance of the project's effects.

Please refer to Appendices B and C for Caltrans policy and a Summary of Relocation Benefits.

3.4.1.2 Affected Environment

Housing in the project area is primarily single family and varies widely in age and style. It includes everything from simple wood cabins, small stucco, and wood-sided homes, 37 to 111 square meters (400 to 1200 square feet), to large, traditional style or very modern homes, 149 to 372 square meters (1600 to 4000 square feet). The setting of these homes is equally mixed, including both eight-hectare (20-acre) or larger rural parcels, as well as lots. There are few curbs or sidewalks in residential areas and only a few multi-family units nearer the southern end of the project.

Retail businesses, particularly the regional chains, are concentrated in the two shopping centers at Vierra Canyon and San Miguel Canyon Roads. The majority of commercial buildings outside the shopping centers are as varied in construction and architectural style as the residential properties, and tend to support mainly locally owned businesses. Outside the shopping center areas, offices, and commercial properties (i.e. auto service, wrecking and body repair, medical clinic, lumber yard, mini-storage facilities, etc.) are located near Route 101 and Russell Espinosa at the south end of the project, and in clusters near Blackie Road and San Miguel Canyon Road in the center of the project.

3.4.1.3 Impacts

A Draft Relocation Impact Study (December 2003) was completed to provide Caltrans, local agencies, and the public with information about the displacement of existing structures and their occupants. The study described the structure and population demographics of each potential displacement and assessed the availability of residential and non-residential units in the area.

The assessment was based on field observations, interviews with real estate professionals, and secondary source information.

Construction of the Prunedale Improvement Project would require the acquisition of 39 residential properties of which 37 are single-family residential units and two are multi-family residential units. Seven businesses would also be acquired by the project. Relocation costs are estimated at \$8,851,000. Table 3.3 shows the number and type of proposed acquisitions.

Table 3.3 Proposed Property Acquisitions

Potential Acquisition	Property Type	Full or Partial Acquisition
7	Businesses	Full
36	Single-Family homes	Full
1	Mobile Home	Full
1	Duplex	Full
1	Single-residence apartment (conversion of a garage)	Full

No relocations or property acquisition would be necessary with the No-Build Alternative.

3.4.1.4 Avoidance, Minimization, and/or Mitigation Measures

According to the Relocation Impact Study (December 2004 and Addendum September 2005), adequate relocation resources for homeowners and renters exist within the affected area. According to data obtained from the Monterey County Board of Realtors for December 2003, about 154 single-family residential properties and two multi-family residences were available for sale in Prunedale and North Monterey County. Rental properties in equivalent cost ranges in the Prunedale and North Monterey County area included 17 single-family residential and 11 multi-family residential properties. An active real estate market also exists in Salinas.

All displacees would be contacted by a Caltrans Relocation Agent, who would ensure that eligible displacees receive their full relocation benefits, including advisory assistance. All activities would be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Relocation resources would be available to all displacees free of discrimination.

Also, the Monterey County Housing Authority has programs available to assist tenants with low or moderate incomes.

3.4.2 Community Character and Cohesion

Community character and cohesion can best be described as “the feeling of community” experienced by residents. The sense of community can be based on local churches, business centers, neighborhoods, or other features important to local residents.

3.4.2.1 Affected Environment

Three communities, or centers, were identified within the project vicinity. Within each of those communities are neighborhoods with distinct characteristics that could be directly or indirectly affected by the proposed project (see Figure 3-4). The first community is located on the west side of Route 101 between San Miguel Canyon Road and Echo Valley Road. The center of the community is a business and park area located on San Miguel Canyon Road just west of Route 101. The business area is made up of a regional library, grocery, and many other basic services. The Manzanita Regional Park is a popular destination for local recreation.

The second community is located east of Route 101, described as the Vierra Canyon area. The community center is located at the intersection of Vierra Canyon Road and Route 101, where a gas station and neighborhood shopping center are located. The third community is located east of Route 101 in the Pesante Road area. This community is characterized by an elementary school and fire station surrounded by a small neighborhood of houses.

Residents throughout the Prunedale area identified Route 101 as their main thoroughfare because it provides primary access to local businesses and residential roads and serves public transit needs. Because of dense high-speed traffic associated with the highway, the route is also seen as a physical division throughout the Prunedale community. Population characteristics for the project area are shown in Table 3.4 at the end of this section.

3.4.2.2 Impacts

The proposed over-crossings and interchanges would help reduce the effect of Route 101’s physical division of the community (see Figures 2-1 through 2-9, project design, in Chapter 2). For example, the overcrossings just south of Blackie Road and at Crazy Horse Canyon/Echo Valley Roads, and the elevation of Route 101 at Russell/Espinosa Roads would allow for access across Route 101 without out-of-direction travel or dangerous at-grade crossings.

Addition of a new road extending Pollock Lane through to Cross Road with intersections at Pesante Road, Orchard Lane, and Cross Road would enhance local circulation among residential properties within the area. Residents would be able to cross either the east or west sides of Route 101 using the new overcrossing and local road systems.

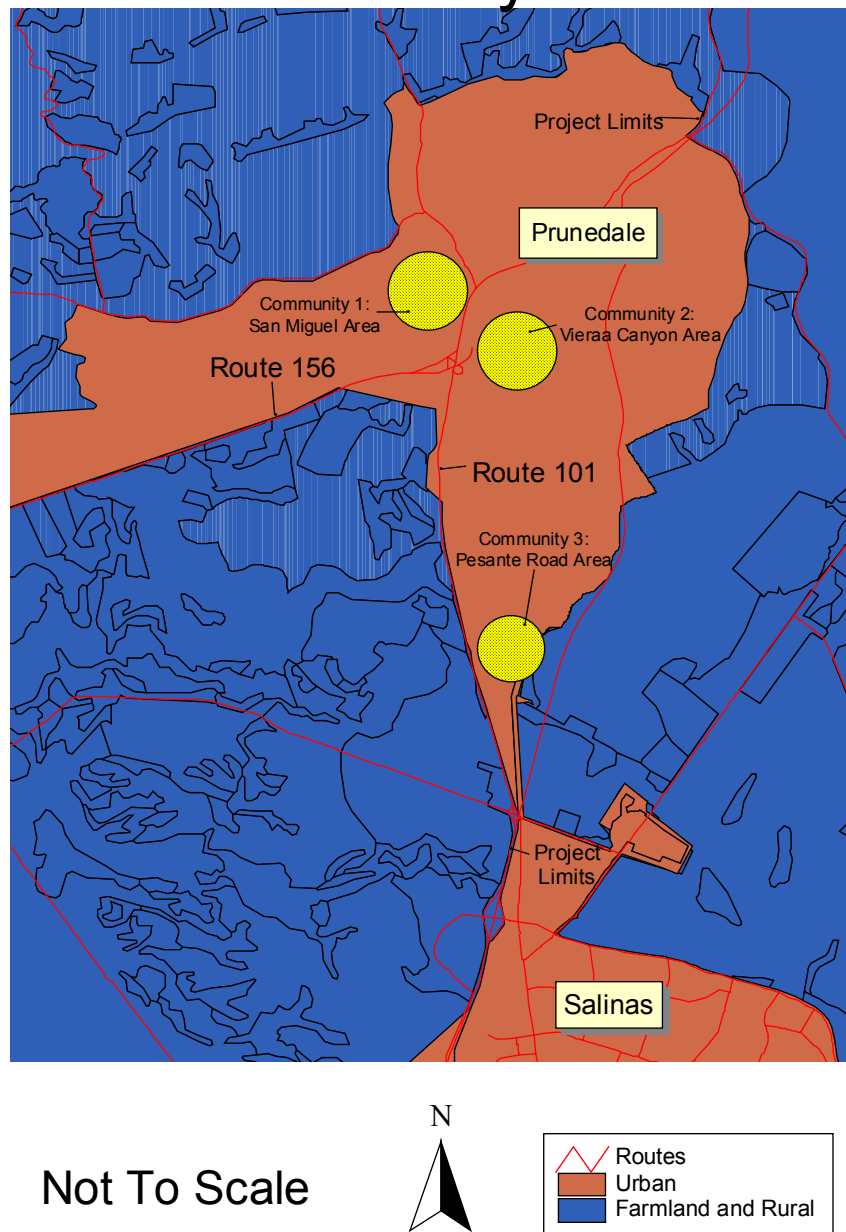
Negative impacts have not been identified for disruption of community cohesion. Given these changes would improve circulation, safety, and access on both sides of Route 101, the improvements could be considered beneficial.

With the No-Build Alternative, residents of the Prunedale area would continue to need to access Route 101 to travel through the community. Internal, local road connections north and south or east and west across Route 101 would continue to be minimal to non-existent.

3.4.2.3 Avoidance, Minimization, and/or Mitigation Measures

Mitigation measures would not be anticipated.

Community Areas



Source: Caltrans 2005

Figure 3-4 Community Boundaries

Table 3.4 Demographics

2000 U.S. Census Data	Proposed Project Area	Prunedale	Monterey County
Total Population	20,669	16,432	401,762
Age (Years)			
Under 5	6.6%	5.4%	7.8%
5-19	24.4%	23.7%	23.8%
20-44	34.0%	32.0%	39.0%
45-54	17.0%	19.0%	12.3%
55 and Over	18.0%	20.0%	17.1%
Ethnicity and Race			
Hispanic	34.5%	23.0%	46.8%
White	56.3%	68.0%	40.3%
Black/African-American	1.4%	1.2%	3.5%
American Indian, Eskimo	0.7%	0.7%	0.4%
Asian	3.3%	3.3%	5.8%
Hawaiian or Pacific Islander	0.2%	0.2%	0.4%
Other Race	0.2%	0.2%	0.3%
Two or More Races	0.2%	3.4%	2.5%
Family Household Income			
Less than \$10,000	2.8%	4.2%	4.5%
\$10,000-\$14,999	3.0%	1.5%	4.2%
\$15,000-\$24,999	7.3%	6.5%	10.3%
\$25,000-\$34,999	6.9%	6.2%	11.8%
\$35,000-\$49,999	15.5%	12.4%	17.8%
\$50,000-\$74,999	22.0%	24.1%	21.3%
\$75,000-\$99,999	20.1%	18.6%	13.3%
\$100,000-\$149,999	14.6%	18.8%	10.8%
\$150,000-or more	7.4%	7.7%	6.1%
Non-Family Household Income			
Less than \$10,000	4.3%	4.7%	6.4%
\$10,000-\$14,999	3.4%	2.5%	4.9%
\$15,000-\$24,999	9.2%	8.0%	11.2%
\$25,000-\$34,999	14.3%	7.5%	12.0%
\$35,000-\$49,999	17.5%	14.1%	17.3%
\$50,000-\$74,999	20.3%	23.7%	20.9%
\$75,000-\$99,999	16.3%	15.7%	11.9%
\$100,000-\$149,999	12.3%	17.0%	9.8%
\$150,000-or more	6.3%	6.6%	5.4%

Source: U.S. Census Bureau, Census 2000, www.census.gov

3.4.3 Environmental Justice

Environmental Justice ensures that low-income and minority populations are considered, and not disproportionately affected as a result a proposed project.

3.4.3.1 Regulatory Setting

All projects involving a federal action (funding, permit, or land) must comply with Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, signed by President Clinton on February 11, 1994. This Executive Order directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Low income is defined based on the Department of Health and Human Services poverty guidelines. For 2004, the poverty line is \$18,850 for a family of four.

All considerations under Title VI of the Civil Rights Act of 1964 and related statutes have also been included in this project. Caltrans commitment to upholding the mandates of Title VI is evidenced by its Title VI Policy Statement, signed by the Director, which can be found in Appendix B of this document.

3.4.3.2 Affected Environment

Caltrans researched the demographics of minority and low-income populations within the project area. U.S. Census data was examined for the five census tracts shown in Figure 3-5 (102.02, 103.02, 103.05, 105.01, and 105.04) that include the project area, as well as more detailed data from census blocks, when available. Census data in some categories was also identified for Prunedale and Monterey County.

Eighty-seven to 91 percent of the population in the project area, as well as in Prunedale and Monterey County, is either White or Hispanic (Table 3.4). The ratio of Hispanic to White in Prunedale is 23.0 percent Hispanic to 68.0 percent White, the project area is 34.5 percent Hispanic to 56.3 percent White, and Monterey County is 46.8 percent Hispanic to only 40.3 percent White.

Of the other four categories identified in the U.S. Census (Black/African American, American Indian/Alaskan Native, Asian, and Native Hawaiian/Pacific Islander), no single group constitutes more than 3.3 percent of the populations of Prunedale or the project area. Monterey County's Asian population reaches 5.8 percent, Black/African American is 3.5 percent, and the remaining two groups are both only 0.4 percent.

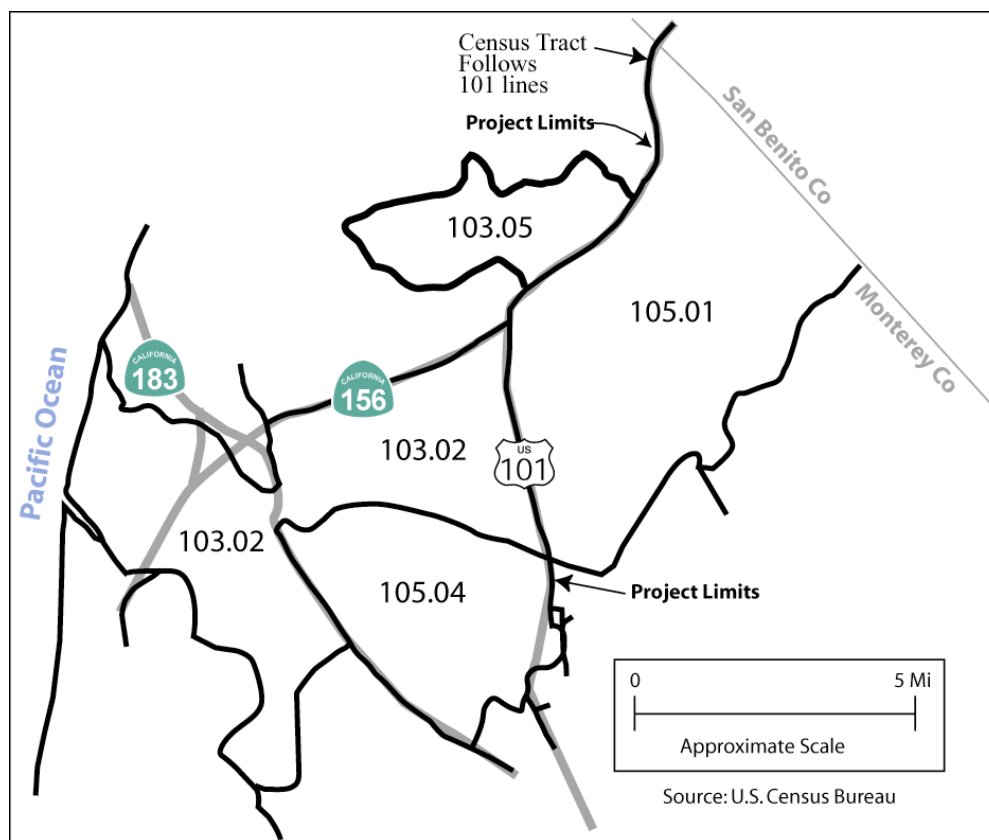


Figure 3-5 U.S. Census Blocks in the Project Area

Census data for race and ethnicity is available at the level of census blocks. Twelve census blocks in the project area contain parcels from which right-of-way acquisition would be necessary to construct the proposed project. Table 3.5 shows the racial and ethnic distribution for those 12 census blocks, as well as for Monterey County, Prunedale, and the project area affected). The data is shown as a percent of the total population with the equivalent number of individuals in parentheses. Only two census blocks would indicate a concentration of Hispanic minorities: Census Tract 105.04, Block 4007 is shown as being 100 percent Hispanic with a total population of only 6 individuals, and Census Tract 105.01, Block 1022 with a total population of 13, indicates a 76.9 percent Hispanic population. Otherwise, the percentage of Hispanic to White indicates mixed neighborhoods. Field reviews of the project area tend to confirm that the ratio of Hispanic population to White may be higher in the southern portion of the project area, but is generally distributed throughout the total area.

Table 3.5 Minority Population Distribution

Census Tract/ Block	Total Popula- tion	Hispanic % (ind)	White % (ind)	Black/ African American % (ind)	American Indian, Eskimo % (ind)	Asian % (ind)	Hawaiian, Pacific Islander % (ind)
103.02/ 2007	263	26.6 (70)	58.6 (154)	--	1.9 (5)	4.2 (11)	--
103.02/ 2019	37	40.5 (15)	56.8 (21)	--	--	--	--
103.05/ 3000	770	20.6 (159)	70.6 (544)	2.2 (17)	0.8 (6)	2.1 (16)	0.1 (1)
105.01/ 1020	7	57.1 (4)	42.9 (3)	--	--	--	--
105.01/ 1021	216	57.4 (124)	35.6 (77)	--	--	--	--
105.01/ 1022	13	76.9 (10)	38.5 (5)	--	--	--	--
105.01/ 3002	210	16.2 (34)	72.9 (153)	1.0 (2)	0.5 (1)	2.9 (6)	0.5 (1)
105.01/ 4000	445	24.0 (107)	68.5 (305)	0.7 (3)	0.2 (1)	4.0 (18)	--
105.01/ 4001	239	16.7 (40)	74.9 (179)	--	0.8 (2)	3.8 (9)	1.3 (3)
105.01/ 4002	31	19.4 (6)	67.7 (21)	--	--	12.9 (4)	--
105.01/ 4007	6	100.0 (6)	--	--	--	--	--
105.04/ 1000	109	55.0 (60)	45.0 (49)	--	--	--	--
Prune- dale	7,393	23.0 (1,700)	68.0 (5,027)	1.2 (89)	0.7 (52)	3.3 (244)	0.2 (15)
Project Area	20,669	34.5 (7,130)	56.3 (11,637)	1.4 (289)	0.7 (145)	3.3 (682)	0.2 (41)
Mon- terey County	355,660	46.8 (166,449)	40.3 (143,331)	3.5 (12,448)	0.4 (1,423)	5.8 (20,628)	0.4 (1,423)

Source: U.S. Census 2000, ind=individual

Census data indicates the Asian minority populations are located in large census blocks in the central and northern sections of the project, both east and west of Route 101: Census Tract 103.02, Block 2007; 103.05, Block 3000; and Census Tract 105.01, Block 4000. Other than the Hispanic populations discussed in the preceding

paragraph, field reviews did not identify concentrations of Asian or other ethnic minorities within the project area.

The 2000 U.S. Census provides income or poverty data only at the census tract level. According to that data, Census Tract 103.02 and 105.04 have a percentage of individuals below the poverty level substantially higher than Prunedale or the project area: 11.0 percent and 9.8 percent versus 6.0 percent and 6.2 percent, respectively. Both census tracts cover large areas west of Route 101 from the southern end of the project to approximately Blackie Road. Field reviews identified one potential low-income concentration in the northwest corner of Espinosa Road and Route 101.

3.4.3.3 Impacts

The proposed project would require right-of-way acquisition from 99 separate parcels. Of those 99 parcels, 81 are residential properties. Based on a survey of surnames and estimates of acquisition need, approximately 22 percent or 18 properties are owned by Hispanics and less than a third of those are likely to require more than a small portion of the total property. The ownership survey did not identify surnames that could be attributed to any other minority group and, as stated in the preceding section, field reviews did not identify concentrations of other minority groups.

Another 40 of the 81 residential properties are in the eight blocks of Census Tract 105.01, approximately 5 of which would require relocating the residents. The remaining 23 right-of-way acquisitions are distributed through the other three Census Tracts.

Other than Hispanics, which the data would indicate are affected by the project at percentages lower than that of the total population, the percentage of minorities in any affected Census Block is so small as to make unlikely a disproportionate impact to any of these minority groups.

The one area of potential low-income populations identified in field reviews was not affected by any right-of-way acquisition for the proposed project.

Based on the level of impacts to minority and low-income populations, it is not probable that there would be disproportionately high and adverse human health and environmental effects resulting from the proposed project.

The No-Build Alternative would not change the conditions currently experienced by any minority or low-income populations.

3.4.3.4 Avoidance, Minimization, and/or Mitigation Measures

Mitigation measures would not be anticipated.

3.5 Utility/Emergency Services

3.5.1 Affected Environment

The proposed project area is primarily rural countryside. The North County Fire Protection District provides emergency services north of Martines Road to the Monterey County line and the Salinas Rural Fire Protection District controls emergency services from south of Martines Road to the end of the proposed project. The Salinas Rural Fire Protection District contracts this area to the Salinas City Fire Department.

The following utilities would be relocated:

- Electric
- Underground gas pipes
- Cable
- Telephone

3.5.2 Impacts

The proposed project would provide emergency services, such as fire, police, and ambulance, with safer access to Route 101 and the adjacent residences and businesses. The addition of interchanges, undercrossings, and overcrossings to the area would allow for safer crossing of, and access to the highway.

Caltrans will coordinate route closures and detours during construction with emergency services. Out-of-direction travel will increase distances from Station 2 (on Pesante Road) of the North County Fire Protection District to some areas once the project is complete. Those additional distances may also increase response times.

During peak hours when congestion is present on Route 101, it is possible that the features provided by this project (overcrossing at Blackie Road/Reese Road, and undercrossings at Russell/Espinosa Road, the new interchange, and Echo Valley /Crazy Horse locations) may improve response times to some areas even when the distances are greater.

Utility relocation is anticipated to occur at various locations throughout the project limits. Most of the relocation work would be within the proposed interchange locations. Utility relocations would be within easements adjacent to the proposed right-of-way.

With the No-Build Alternative, emergency services would continue to be restricted to the existing conditions of less safe access to Route 101. No alternative routes would need to be planned for construction and no utilities would be relocated.

3.5.3 Avoidance, Minimization, and/or Mitigation Measures

Discussion with the North County Fire District is ongoing. Where feasible during final design, measures to minimize impacts to emergency vehicle response times will be made.

3.6 Traffic and Transportation/Pedestrian and Bicycle Facilities

3.6.1 Regulatory Setting

The Federal Highway Administration directs that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of federal-aid highway projects (see 23 CFR 652). It further directs that the special needs of the elderly and the disabled must be considered in all federal-aid projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the roadway.

Caltrans and the Federal Highway Administration are committed to carrying out the 1990 American with Disabilities Act by building transportation facilities that provide equal access for all persons. The same degree of convenience, accessibility, and safety available to the general public would be provided to persons with disabilities.

3.6.2 Affected Environment

With the anticipated traffic growth in the region, under the No-Build Alternative traffic congestion would continually worsen through the forecast year of 2030. With the Build Alternative, initially congestion would be reduced, but as time goes on, congested conditions would return.

3.6.3 Impacts

Safety

The project would improve safety by eliminating left-turn movements and thereby reducing the number of traffic conflict points. Closing of all median barrier gaps via the construction of concrete median barriers would eliminate all cross traffic conflicts. The elimination of left-turn movements to and from Route 101 would be mitigated by the construction of two new interchanges, improvements to an existing interchange, and construction of an undercrossing and an overcrossing.

No safety improvements would be made with the No-Build Alternative and accidents would continue to occur at the many traffic conflict points.

Local Circulation

The project would affect transportation facilities. Modifications to both Route 101 and local roads would improve safety and local circulation, although in some cases the changes would add vehicle trips to segments of local roads. Traffic operations analysis of the additional vehicle trips indicates that the local roads can handle the number of vehicles expected to be diverted by these improvements. For example, Harrison Road, a rural two-lane, can accommodate the additional traffic this project would generate, and the proposed Rancho San Juan traffic, as well.

Elimination of the left-turn movements to and from Route 101 would divert local traffic to the two new interchanges, the improved San Miguel Canyon Road interchange, the new overcrossing, and the new undercrossing.

These five features would enhance local circulation by greatly reducing the dependence of local traffic movement on Route 101. This is particularly true for pedestrians and bicyclists, as well as vehicles, moving between the residential and commercial areas on opposite sides of the highway.

The trade-off for these enhancements is the inconvenience of more out-of-direction travel. By consolidating at-grade streets and driveways and eliminating left turns

across the state highway, drivers in many areas will add as much as four miles to their normal travel distance in certain directions.

With the No-Build Alternative, no new local circulation improvements would be made. Local residents would continue to have direct access to Route 101, and left-hand turns to and from Route 101 would continue to be permitted.

Pedestrian and Bicycle Facilities

The project would add pedestrian and bicycle access across Route 101 at the Russell/Espinosa undercrossing, Blackie Road/Reese Circle overcrossing, and Crazy Horse Canyon/Echo Valley roads interchange.

The No-Build Alternative would not provide this additional safe access for pedestrians and bicycles.

3.6.4 Avoidance, Minimization, and/or Mitigation Measures

Mitigation measures would not be anticipated.

3.7 Visual/Aesthetics

The Visual Impact Assessment analyzed environmental data germane to potential visual impacts from the Route 101 Prunedale Improvement Project, based on process guidelines established in the *Visual Impact Assessment for Highway Projects* (Department of Transportation, Federal Highway Administration, Office of Environmental Policy, 1983). The Visual Impact Assessment identifies existing visual resources and their quality within the area, evaluates proposed visual changes—both positive and negative, determines the effect of the proposed permanent visible design features on its viewers, and develops mitigation measures to avoid or minimize negative visual impacts (refer to the Visual Impact Assessment for more details).

3.7.1 Regulatory Setting

The National Environmental Policy Act of 1969 as amended establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and *aesthetically* (emphasis added) and culturally pleasing surroundings [42 U.S.C. 4331(b)(2)]. To further emphasize this point, the Federal Highway Administration, in its implementation of the National Environmental Policy Act [23 U.S.C. 109(h)], directs that final decisions regarding projects are to be made in the

best overall public interest, taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

Likewise, the California Environmental Quality Act establishes that it is the policy of the state to take all action necessary to provide the people of the state “with...enjoyment of *aesthetic*, natural, scenic and historic environmental qualities” [CA Public Resources Code Section 21001(b)].

3.7.2 Affected Environment

A Visual Impact Assessment was conducted for the project (February 2004). The report indicated the project is located in the agricultural and wooded hills of northern Monterey County.

Prunedale consists primarily of rural residential subdivisions, with clusters of dense suburban, commercial, and light industrial development scattered along the Route 101 corridor. Surroundings with green vegetation and rolling terrain contrasted by open space used for agriculture, grazing, recreation, and drainage basins, create a predominately rural feeling and contribute to the region’s scenic beauty. Views of farms, fields, pastures, vineyards, and orchards are noted as important visual assets, and there is strong local concern over the conversion of farmland and open space to other developed uses. Open views of hills, wooded canyons, and distant mountain ranges embracing the Prunedale area are noted as the “community’s skyline,” providing a picturesque backdrop for the town and natural landmarks for orientation. Exposure of erosive soils by agricultural practices or other development has caused deep erosion scars with a typical “badlands” appearance in some areas.

Five Landscape units were identified within the project area: agricultural (Figure 3-6), open space (Figure 3-7), rolling pasture/rural residential, rural residential/watershed, and commercial/suburban residential (Figure 3-8).

Residential neighborhoods traditionally have large-lot, single-family, custom ranch-style homes with scattered sheds and barns. Housing also includes pockets of smaller scale suburban neighborhoods, multi-family residences, a mobile home park, and farm worker complexes. Freestanding rural-delivery mailboxes and rustic wood and wire fences reinforce the rambling country feeling of the area. Strip commercial businesses are scattered along Route 101 and shopping centers are concentrated near the main arterials—Vierra Canyon Road, San Miguel Canyon Road, Prunedale North Road, and Russell/Espinosa Roads.



Figure 3-6 Agricultural View From Route 101



Figure 3-7 Open Space View From Route 101

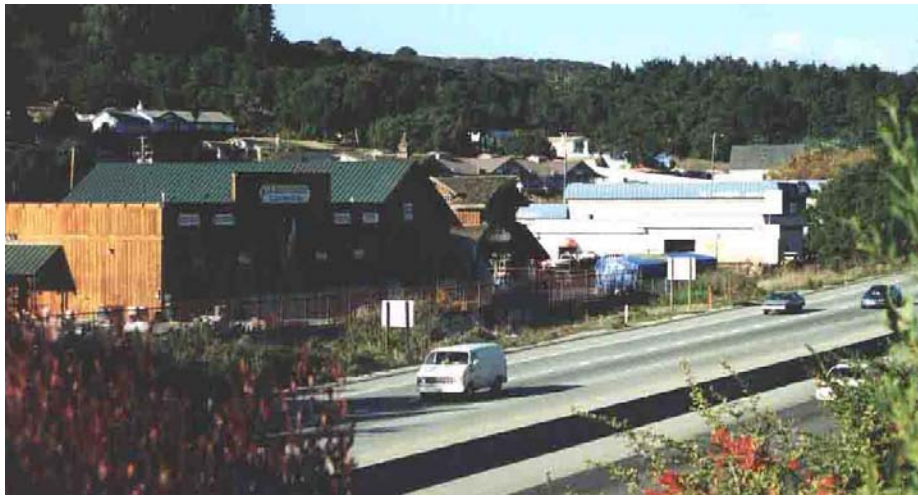


Figure 3-8 Commercial View From Route 101

The paved highway is a major component of the view and is an influential feature in the landscape because of frequent use by a large number and variety of people. The continuity of the natural view from the road is an important part of its visual quality. The dominance of the landscape is highly dependent on the elevation of the viewer, whether they are low in the valley or higher up on the many ridges. Existing concrete median barriers, utility lines and poles, traffic signs and signals, light standards, local roads and driveways, guardrail and fences, and several large advertising billboards detract from the generally rural character of the area.

3.7.3 Impacts

3.7.3.1 Rural Character

This area is characterized by rolling hills, chaparral, and oak woodlands. The proposed interchanges and grade separation structures would be placed in the context of the existing highway facility. While their contrast with the existing conditions would be high, crossovers, ramps, and frontage roads are a common sight along Route 101 and would not be unduly noted by most drivers. The proposed median barrier is an extension of an existing concrete barrier located within the Prunedale area. The barrier is not a new element nor would it block views of the surrounding visual resources that contribute most to the scenic quality of the corridor. Vegetation

loss and the introduction of man-made structures could result in an overall loss of rural character.

With the No-Build Alternative, the rural character of the project area would be unaffected.

3.7.3.2 Visual Compatibility

The proposed grade separation interchanges would be visible from multiple locations, angles, and distances (Figures 3-13, 3-22, and 3-25), however the ability of the large-scale natural scene to absorb visual changes within the confines of the existing road is high. Viewer groups unfamiliar with the area would be less sensitive to the changes, as overcrossing structures have become common in the highway landscape and can even function as landmarks. However, the area would also become somewhat less memorable and distinguished for motorists on Route 101, due to this common similarity with other structures located along other stretches of the highway. The quality of the view would decrease for some neighborhood viewers of the highway because of tall vertical elements encroaching on the horizon, however these viewers are generally low in number. New lights near interchanges would be shielded to keep light downcast.

The proposed soundwalls in the Russell/Espinosa and White Road (Figure 3-16) area would result in a noticeable visual change in the area. While undesirable views of the highway would be blocked for people living near the road, positive views of agricultural fields and distant mountains would also be lost for local residents. New retaining walls would also be seen near the San Miguel interchange. Motorists could still view agricultural land to the west, but would be shielded from views of the housing in the vicinity of White Road.

With the No-Build Alternative, the motorist would retain views of the housing in the vicinity of White Road. Without the proposed soundwalls, potentially undesirable views of the roadway would remain visible to people living near the road. The grade-separation interchanges would not be constructed and would, therefore, not obstruct any existing view.

3.7.3.3 Vegetation

The cut slopes proposed at Blackie/Reese and Crazy Horse Canyon/Echo Valley would result in a loss of mature trees and dense vegetation. The loss of vegetation and the addition of associated manmade structures, signs, and utilities, into an area with

moderate to low previous encroachments would result in an overall loss of rural character.

Grading for the temporary detour road connecting the existing highway to Crazy Horse Canyon Road during construction would result in an additional loss of mature vegetation and would raise the elevation of the existing terrain. Severe erosion scars adjacent to the existing highway opposite Crazy Horse Canyon Road would be eliminated. Other construction activities and dirt stockpiles would only briefly detract from the visual quality. Potential indirect impacts, such as new erosion and changes in water supply or land management practices, could have minor secondary negative effects on the visual environment.

North of the Route 156/101 interchange, Route 101 is eligible to be designated as a scenic highway. State and county scenic policies require a higher degree of aesthetic consideration during the visual impact assessment process, but do not exclude the construction of transportation features.

There would be no loss of existing vegetation with the No-Build Alternative and the existing scenic qualities of the highway would be unaffected.

Adverse visual impacts of the Build Alternative would be compensated for by the recommended mitigation measures. Once in place, only viewers familiar with Route 101 would perceive that the highway facility had been changed.

Figures 3-9 through 3-11 display the existing, proposed, and mitigated view of the proposed Russell Road Undercrossing.



Figure 3-9 Existing View at Russell Road Looking West



Figure 3-10 Proposed View at Russell Road Looking West (Simulated)



Figure 3-11 Mitigated View at Russell Road Looking West (Simulated)

Figures 3-12 through 3-14 display the existing, proposed, and mitigated view of the proposed new local road interchange approximately 1.0 kilometer (0.62 miles) north of Russell/Espinosa Road.



Figure 3-12 Existing View on Route 101 Looking South Towards New Interchange Located Just North of Russell Road



Figure 3-13 Proposed View on Route 101 Looking South Towards New Interchange Located Just North of Russell Road (Simulated)

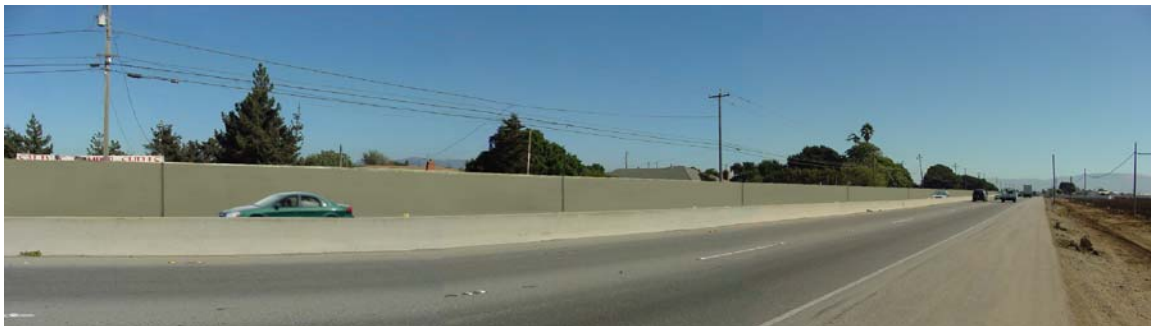


Figure 3-14 Mitigated View on Route 101 Looking South Towards New Interchange Located Just North of Russell Road (Simulated)

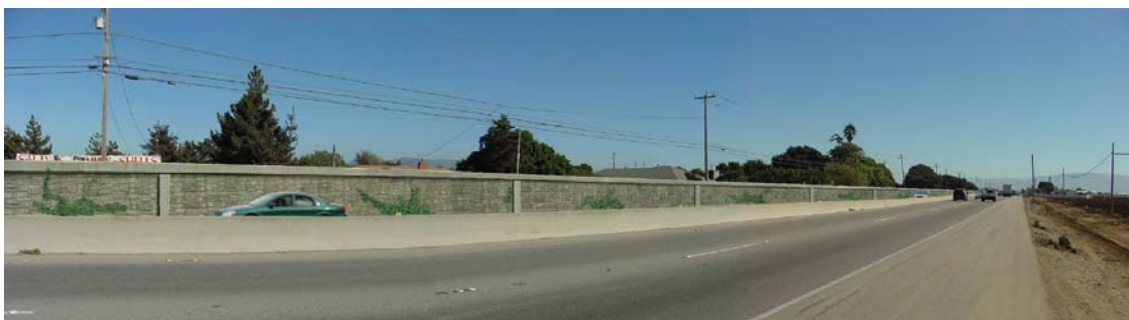
Figures 3-15 through 3-17 display the existing, proposed, and mitigated view of the proposed soundwall near White Road.



**Figure 3-15 Existing View on Route 101 Looking Southeast
Near White Road**



**Figure 3-16 Proposed View on Route 101 Looking Southeast
Near White Road (Simulated)**



**Figure 3-17 Mitigated View on Route 101 Looking Southeast
Near White Road (Simulated)**

Figures 3-18 through 3-20 display the existing, proposed, and mitigated view of the proposed new Blackie Road/ Reese Circle connection.



Figure 3-18 Existing View on Prunedale Road Looking South Toward Blackie/Reese Circle Connection



Figure 3-19 Proposed View on Prunedale Road Looking South Toward Blackie/Reese Circle Connection (Simulated)



Figure 3-20 Mitigated View on Prunedale Road Looking South Toward Blackie/Reese Circle Connection (Simulated)

Figures 3-21 through 3-23 display the existing, proposed, and mitigated view of the proposed Crazy Horse Canyon Overcrossing.



Figure 3-21 Existing View on Route 101 Looking North Toward Crazy Horse Overcrossing



Figure 3-22 Proposed View on Route 101 Looking North Toward Crazy Horse Overcrossing (Simulated)



Figure 3-23 Mitigated View on Route 101 Looking North Toward Crazy Horse Overcrossing (Simulated)

Figures 3-24 through 3-26 display the existing, proposed, and mitigated view of the proposed Crazy Horse Canyon overcrossing.



Figure 3-24 Existing View on Route 101 Looking South Toward Crazy Horse Overcrossing



Figure 3-25 Proposed View on Route 101 Looking South Toward Crazy Horse Overcrossing (Simulated)



Figure 3-26 Mitigated View on Route 101 Looking South Toward Crazy Horse Overcrossing (Simulated)

3.7.4 Cumulative Impacts

The Prunedale Improvement Project proposes to modify one interchange and construct two new interchanges within an approximately 10-kilometer (6-mile) stretch of Route 101. In addition to assessing the visual impacts of each specific interchange location, it is appropriate to examine their collective impact on the visual context of Route 101 through the Prunedale area and their cumulative impact when combined with other transportation and development projects along the corridor. The visual impact of individual project components may not be significant when considered separately; however, they can have broader regional implications when viewed together with the impacts of other past and present developments, or with the potential visual impacts of reasonably foreseeable future landscape changes.

The perceived boundaries of the Prunedale area and the sense of arrival into the community have changed many times in the past 70 years. Multiple incremental alterations and several milestone transformations have occurred since the old Route 2 was superseded by construction of Route 101 through the area in the 1930s. Most recently, a major new flyover was constructed at San Miguel Canyon Road in 2000-2003, and construction to reconfigure the southbound side of the Route 101/156 interchange was just completed in 2005. Several acceleration and deceleration lanes have also been added within the corridor in the last five years, and more are planned or currently in construction. These projects include grading and removal of mature vegetation and skyline trees to accommodate new retaining walls. Minor maintenance projects, as well as concrete median barrier and pavement rehabilitation projects, have also played a part in the visual change experienced in the area. These projects have contributed to an overall increase in the amount of paved areas and, while all recent projects have included new landscape planting, those trees will be small and immature for many years before they begin to function as the screens or landmarks they replaced. In future, the proposed Route 101 Freeway Project (Bypass) and the Route 156 West Corridor Project may also further alter the overall appearance of the Prunedale area.

The local Prunedale community identifies itself with its agricultural heritage, but it is located within the wider context of Monterey County and the central California coast, and as such is subject to the transportation needs and aesthetic sensitivities of a greater regional population. While the Prunedale area still remains relatively rural in character when compared to larger cities to the north and south, the cumulative visual impact of enlarging the highway facility and the ongoing spread of residential and

commercial development adjacent to the Highway 101 right-of-way has contributed to an increased “suburbanization” of the viewshed in several locations. The Prunedale Improvement Project would continue this regional visual shift.

Currently, the rural impression of Prunedale is reinforced by the multiple at-grade intersections and driveways which dominate the 16-kilometer (10-mile) -long highway corridor from Russell/Espinosa north to the county line. There are only two existing grade-separations in the downtown Prunedale core at Route 101/156 and at the new San Miguel Canyon Road interchange. The most noticeable cumulative impact from the proposed project would be the continuation of the sequence of more visually prominent overhead grade separation structures, which distinguish the more well developed commercial and residential character of the City of Salinas. Travelers on Route 101 would experience less of a distinction between Prunedale and the more urbanized Salinas area. The total 15-20 minute driving experience would be characterized by the rhythmic series of overhead structures and their strong built forms on the approaching horizon.

Changes to the intactness of the view outside the confines of the paved highway due to the loss of mature vegetation and skyline trees are also likely to contribute to a cumulative decrease in the generally scenic rural character of the area when combined with previous losses, especially when considering the expected sensitivity of local viewers of the roadway and surrounding neighborhoods. Additional cumulative impacts could result in future if more man-made elements, which would block or distract from views of the surrounding hills, are added to the corridor shoulders

3.7.5 Avoidance, Minimization, and/or Mitigation Measures

The Visual Quality Assessment indicates that the qualities that make this highway visually enjoyable would outweigh the negative effects of the proposed project. A roadway that is safe, well built, and well maintained strengthens the perception of a visually appealing community.

Based on the Visual Quality Assessment, the following measures would be taken to reduce potential impacts: grading for a natural appearance, minimizing structure profiles, using materials and special treatments that enhance necessary additions to the built environment, and planting trees and landscaping to control erosion and improve aesthetics.

Physical Environment

3.8 Hydrology and Floodplains

This section describes the streams, creeks, and floodplains in the project area, and the potential to affect these resources.

3.8.1 Regulatory Setting

Executive Order 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. The Federal Highway Administration requirements for compliance are outlined in 23 CFR 650 Subpart A. To comply, the following must be analyzed:

- The practicability of alternatives to any longitudinal encroachments
- Risks of the action
- Impacts on natural and beneficial floodplain values
- Support of incompatible floodplain development
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values affected by the project.

The 100-year floodplain is defined as “the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the 100-year floodplain.”

3.8.2 Affected Environment

The National Flood Insurance Program 100-year floodplain (considered base flood condition) is defined as a flood event that would be equaled or exceeded an average of once during any 100-year period. Floodways are defined as the channel of a stream, plus any adjacent floodplain area, that must be kept free of encroachment so that 100-year floods can be carried without substantial increases in flood elevations. A Location Hydraulic Study and Floodplain Evaluation (June 4, 2004) was prepared for the project area, and analyzed the potential flood zones and beneficial values of local waterways.

As designated by the Federal Emergency Management Agency, an area within the project limits is classified as flood “Zone A4.” The Location Hydraulic Study and Floodplain Evaluation identified four major streams in the project area: Prunedale

Creek, Gabilan Creek, Santa Rita Creek, and Elkhorn Slough. Prunedale Creek is an alluvial stream, which drains in the southwesterly direction, generally following the existing Route 101 alignment before turning west and draining into Tembladero Slough (Figure 3-27). The major tributaries to Prunedale Creek are San Miguel Canyon Creek, Vierra Canyon Creek, and Pesante Canyon Creek. Within the project limits, three flood zone types occur (Figure 3-27): Zone A, X, and X500. Zone A flood zones correspond to the 100-year floodplain areas shown on Flood Insurance Rate Mapping. Zone X is described as areas of minimal flooding and Zone X500 is classified as a 500-year floodplain.

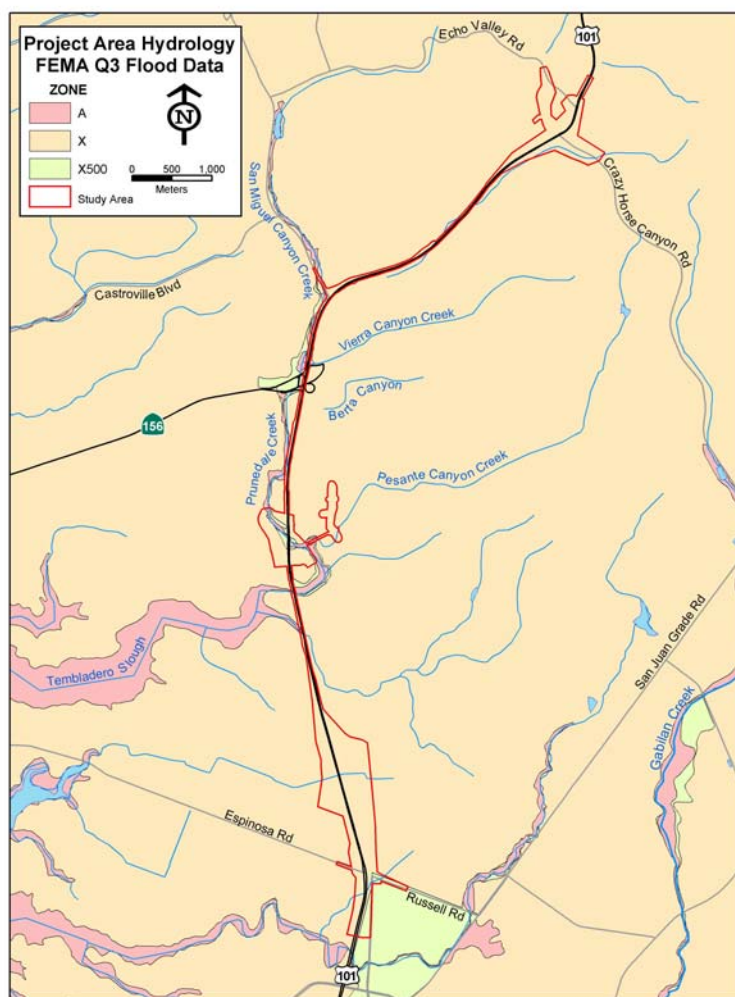


Figure 3-27 Project Area Hydrology

3.8.3 Impacts

Caltrans prepared a Location Hydraulic Study and Floodplain Evaluation, using National Flood Insurance Program maps, for the project area (June 4, 2004). The purpose of this study was to determine how the flow of water would affect the highway, the base floodplain, and the surrounding area. The following project locations would encroach on the floodplain and regulatory floodway:

- A four-legged intersection with widened pavement for turning movements at Prunedale South Road and Blackie Road. Prunedale Creek travels under the existing three-legged intersection.
- At the Reese Circle and Cross Road intersection, the intersection would be widened for turning movements. Prunedale Creek travels under the intersection.
- The San Miguel Canyon Road interchange improvements include the addition of traffic lanes on San Miguel Canyon Road between the southbound Route 101 off-ramp and North Prunedale Road, and a left-turn lane along the southbound off-ramp. San Miguel Canyon Creek crosses the intersection of San Miguel Canyon Road and Prunedale North Road.

The improvements for the Crazy Horse interchange would encroach into Prunedale Creek. The creek would be relocated east, adjacent to the proposed project limits. This location is not classified as a Federal Emergency Management Agency designated floodplain.

The Floodplain Evaluation Report identified the following:

- The project would not have longitudinal encroachments on the base floodplain
- The risks associated with the project are not significant
- The project would not significantly impact the natural and beneficial floodplain values
- The project would not support incompatible floodplain development
- The project would not require special mitigation measures to restore or preserve natural and beneficial floodplain values
- As defined in 23 CFR, Section 650.105(q), the project would not constitute a significant floodplain encroachment

The No-Build Alternative would have no impact on the floodplain.

3.8.4 Avoidance, Minimization, and/or Mitigation Measures

Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values affected by the project would include the installation of culverts to allow for the natural flow of storm water.

Intersection improvements in the regulatory floodway will be mitigated with culverts to be consistent with the existing regulatory floodway.

3.9 Water Quality and Storm Water Runoff

3.9.1 Regulatory Setting

The primary federal law regulating Water Quality is the Clean Water Act. Section 401 of the Act requires a water quality certification from the State Board or Regional Board when a project: 1) requires a federal license or permit (a Section 404 permit is the most common federal permit for Caltrans projects), and 2) would result in a discharge to waters of the United States.

Section 402 of the Act establishes the National Pollutant Discharge Elimination System permit system for the discharge of any pollutant (except dredge or fill material) into waters of the United States. To ensure compliance with the Clean Water Act Section 402, the State Water Resources Control Board has issued a National Pollutant Discharge Elimination System, Statewide Storm Water Permit to regulate storm water discharges from Caltrans facilities. The permit regulates storm water discharges from the Caltrans right-of-way both during and after construction, as well as from existing facilities and operations. The permit regulates both storm water and non-storm water discharges during and after construction.

In addition, the State Water Resources Control Board issues the Statewide Permit for all Caltrans' construction activities on 1 acre or greater. This permit also applies to a number of smaller projects that are part of a common plan of development exceeding 1 acre or projects that have the potential to significantly impair water quality. Caltrans projects subject to the Statewide Storm Water Permit require a Storm Water Pollution Prevention Plan, while all other projects, smaller than 1 acre, require a Water Pollution Control Program.

The California Environmental Protection Agency has delegated administration of the federal National Pollutant Discharge Elimination System program to the State Water Resources Control Board and nine regional boards. This project is located within the

jurisdiction of the State Water Resources Control Board and the Central Coast Regional Water Quality Control Board.

Subject to Caltrans' review and approval, the construction contractor prepares either the Storm Water Pollution Prevention Plan or the Water Pollution Control Program. These identify construction activities that may cause pollutants in storm water and measures to control these pollutants. Since neither the Water Pollution Control Program nor the Storm Water Pollution Prevention Plan are prepared at this time, the following discussion focuses on anticipated pollution sources or activities that may cause pollutants in the storm water discharges.

Additional laws regulating water quality include the Porter-Cologne Water Quality Act, Safe Drinking Water Act, and Pollution Prevention Act. State water quality laws are codified in the California Water Code, Health and Safety Code, and Fish and Game Code, section 5650-5656.

3.9.2 Affected Environment

Surface Water

The project is located within the Salinas Hydrologic Unit and surface water drains to the Pacific Ocean through Monterey Bay.

Surface water in the proposed project area generally flows east to west. Precipitation averages about 15 inches per year. Due to the relatively high permeability of sediments underlying the area, a very low percentage of annual rainfall is runoff. Most of the canyons in the proposed project area receive insufficient runoff to maintain active, continuous channels along their lengths.

The major streams in the watershed area are Prunedale Creek on the west and Santa Rita on the southeast. Prunedale Creek is an alluvial stream that drains the hillside in the northern portion of Monterey County, north of Salinas. The Prunedale Creek watershed is bordered by the Elkhorn Slough watershed to the north and west, by the Santa Rita Creek watershed to the southeast, and by the Gabilan Creek watershed to the east. The major tributaries to Prunedale Creek are San Miguel Canyon Creek, Vierra Canyon Creek, and Pesante Canyon Creek.

Santa Rita Creek is a stream that drains the low-lying agricultural land on the northern edge of Salinas, generally west of San Juan Grade Road. The Santa Rita Creek watershed is bordered by Prunedale Creek to the north, Gabilan Creek to the

east, and by the Reclamation Ditch watershed to the south and west. Santa Rita Creek crosses Route 101 south of Russell Road and drains to the Reclamation Ditch south of Espinosa Road. The Reclamation Ditch discharges to Tembladero Slough near Castroville.

Groundwater

There are two ground water aquifers in the project area, located within the Salinas River Groundwater Basin. The two consist of upper and lower level aquifers divided by a clay layer. Elevated levels of nitrate currently exist in the upper aquifer.

Prunedale Basin and the East Side Area of the Salinas Valley Basin have experienced overdrafting of groundwater causing gradual declines in groundwater surface levels. In the Prunedale Groundwater Shortage Area, the overdrafting problem has become especially acute, with some domestic wells drying up completely. Monterey County currently does not allow new wells to be drilled into the upper water-bearing zones due to the existing nitrate concentration, for which septic systems in the area are the prime contributors.

3.9.3 Impacts

Caltrans conducted a Water Quality Assessment for the proposed project, which identifies potential impacts on surface water and groundwater resources resulting from the proposed project and describes project design, procedures, and practices that would minimize potential impacts. The Water Quality Assessment concluded that minimal short-term impacts to both surface and ground water quality would occur but there would be no long-term impacts to water quality. Nor is it anticipated that the project would substantially increase groundwater demand.

Surface Water

Pollutants commonly associated with highways are litter, heavy metals, petroleum hydrocarbons, brake materials, oil and grease, sediment, suspended solids, and pesticides and herbicides. Potential impacts to water quality are associated with the discharge of pollutants in storm water runoff from the highway.

- Construction activities also have the potential to impair surface water quality temporarily because disturbed and eroded soil, petroleum products, and miscellaneous wastes may be discharged into receiving waters. Sediment and associated contaminants that enter stream channels can increase turbidity

(cloudiness), stimulate growth of algae, increase sedimentation of aquatic habitat, and introduce compounds that are potentially harmful to fish and aquatic organisms.

The project would not substantially alter the existing drainage pattern of the area. It would not violate water quality standards, or create water runoff that would exceed the capacity of the receiving waters or storm-water drainage channels, or substantially degrade surface water quality.

Groundwater

Water will be needed on the project during construction for dust control and other activities, and for landscaping. The first two to three years after construction, water will be needed for establishment of the native revegetation planting and erosion control, and it will also be needed in years of low rainfall to maintain these trees and shrubs. Water will be needed for the ongoing maintenance of some ornamental landscaping. It is likely that new wells would be dug at the three locations within the project area to fulfill that need.

Permits for these new wells would be obtained from Monterey County for authorization of the well placement, depth, and flow rates, at which time these specifics will be finalized. These wells would pump a relatively low 30 to 40 gallons per minute for 12 to 16 hours per day initially. Use would taper off as plants become established.

Using the existing domestic wells that otherwise would be decommissioned, rather than constructing new wells, was considered. This was determined to be infeasible since the existing wells are too small and shallow and have too little output.

This project would not have substantial impacts to groundwater quality.

Neither surface nor groundwater quality would be impacted by the No-Build Alternative.

3.9.4 Cumulative Impacts

With implementation of treatment measures/Best Management Practices, this project's water quality impacts will not be substantial and will not contribute to substantial regional water quality impacts or groundwater depletion.

The potential for cumulative temporary impacts to occur in the watershed depends greatly on the number of large projects that are permitted for construction within the watershed in the same time frame as this project (2009- 2012). All other projects, past, present, and reasonably foreseeable, will require County permits and will have regulatory oversight by the Central Coast Regional Water Quality Control Board, ensuring no significant short- term or long-term cumulative impacts within the watershed.

The National Pollutant Discharge Elimination System permit has been derived through concurrence of the U.S. Environmental Protection Agency and the Regional Water Quality Control Boards. Specific performance activities are incorporated in the respective Basin Plans (regional planning tool) and take into account both short- and long-term mitigation practices that are constantly monitored and updated to ensure compliance with the non-degradation policy. The public, public agencies, and basin-wide planning activities are all considered and provide a holistic approach when new projects are considered and during the triennial review of the policies incorporated in the Basin Plan. Further, these policies are in a constant state of flux to reflect recent achievements, new information, and new concerns. This provides a system of checks and balances to ensure that current projects, and future projects, do not impair water quality.

3.9.5 Avoidance, Minimization, and/or Mitigation Measures

Surface Water

Potential temporary impacts to water quality during construction would be addressed in both the design and construction phases. In the design phase, plans would be made to ensure that there would be no detrimental discharge into any bodies of water. To minimize or eliminate potential impacts to the maximum extent practicable, Caltrans would determine the feasibility of incorporating the following design pollution prevention Best Management Practices into the project:

- Preservation of Existing Vegetation
- Concentrated Flow Conveyance Systems
- Slope Surface Protection Systems

To address the potential impacts to water quality during the construction phase, Caltrans would require the contractor to prepare and implement a program to control water pollution effectively during construction. Before the commencement of project construction, the contractor would be required to prepare a Storm Water Pollution

Prevention Plan that satisfies the requirements of Caltrans' National Pollutant Discharge Elimination System Permit, the General Construction Permit, and Caltrans' *Storm Water Pollution Prevention Plan/Water Pollution Control Plan Preparation Guide*, (March 2003).

Construction scheduling and staging would consider the amount and duration of soil exposed by wind, rainfall, runoff, and vehicle tracking and would seek to minimize the disturbed soil area during the rainy season. A schedule would be prepared by the contractor and incorporated into the Storm Water Pollution Prevention Plan that shows the sequencing of construction activities with the installation of erosion and sediment control Best Management Practices. The Central Coast Regional Water Quality Control Board has identified the rainy season within the project area to be from October 15 to April 15. The contractor would amend the Storm Water Pollution Prevention Plan as stage construction, site conditions, and weather conditions dictate.

Caltrans has a statewide National Pollutant Discharge Elimination System Permit/Section 401 Certification for Water Discharge requirements, which is always in effect. Coordination with the Regional Water Quality Control Board would ensure that water quality is not compromised by the discharge of any pollutants into bodies of water during construction. The permits require the following:

- A Notice of Construction is to be submitted to the appropriate Regional Water Quality Control Board at least 30 days before the start of construction. The tentative start date, tentative duration, location of construction, description of the project, an estimate of the number of affected areas, name of the resident engineer in charge of the project, and the telephone number of the resident engineer would be reported.
- A Storm Water Pollution Prevention Plan is to be prepared and implemented during construction to the satisfaction of the resident engineer.
- As the proposed project is located within a designated urban area, Best Management Practices would be evaluated and incorporated as determined feasible by the project engineer.
- A Notice of Completion would be submitted to the Regional Water Quality Control Board upon completion of construction and stabilization of the site. A project would be considered complete when the criteria for final stabilization in the Construction General Permit are met.

With adequate measures and precautions, the project would not adversely affect the water quality in the project area.

Groundwater

To conserve water, the three new wells would run primarily at night and until early morning, depending on the time of year, to reduce water lost by evaporation. The wells would be connected to the irrigation system in the area controlled by a Remote Irrigation Control System computer from the Salinas Maintenance station. This system can detect problems with the wells, or if an irrigation pipe is broken, the system shuts down and sends an alert to maintenance staff. The computer system can also check local weather station information to determine watering needs, preventing it from running on rainy days or when soil moisture is high.

During the permit process, the construction methods will be determined with Monterey County permitting staff and consider the proximity of adjacent domestic wells to minimize any affect the new wells could have on private supplies.

Domestic wells will be decommissioned before construction of this project occurs. At locations where right of way needs are such that water wells or septic systems are impacted, first relocation to an acceptable location on the parcel will be explored. Acquisition of the entire parcel may be necessary when an appropriate location can not be found. As part of partial acquisition of any parcel upon which a well or septic system is located, the septic system and/or well would be replaced (including permitting, drilling and installation).

The project will also create several storm water infiltration ponds, which will help contribute to shallow groundwater recharge.

To ensure that impacts to water quality from non-point sources of pollution are held to a minimum and that goals and management principles of the Regional Board are met, permanent treatment in the form of Best Management Practices will be implemented to minimize any long-term impacts to water quality from this project. Infiltration basins, bio-filtrations swales, and biofiltration trenches will likely be the treatments that are implemented.

3.10 Hazardous Waste/Materials

A hazardous waste/material includes any substance with the potential to cause a negative affect to the surrounding environment.

3.10.1 Regulatory Setting

Hazardous materials and hazardous wastes are regulated by many state and federal laws. These include not only specific statutes governing hazardous waste, but also a variety of laws regulating air and water quality, human health, and land use.

The primary federal laws regulating hazardous wastes/materials are the Resource Conservation and Recovery Act of 1976 and the Comprehensive Environmental Response, Compensation and Liability Act of 1980. The purpose of the Comprehensive Environmental Response, Compensation and Liability Act, often referred to as Superfund, is to clean up contaminated sites so that public health and welfare are not compromised. The Resource Conservation and Recovery Act provides for “cradle to grave” regulation of hazardous wastes. Other federal laws include:

- Community Environmental Response Facilitation Act of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety & Health Act (OSHA)
- Atomic Energy Act
- Toxic Substances Control Act
- Federal Insecticide, Fungicide, and Rodenticide Act

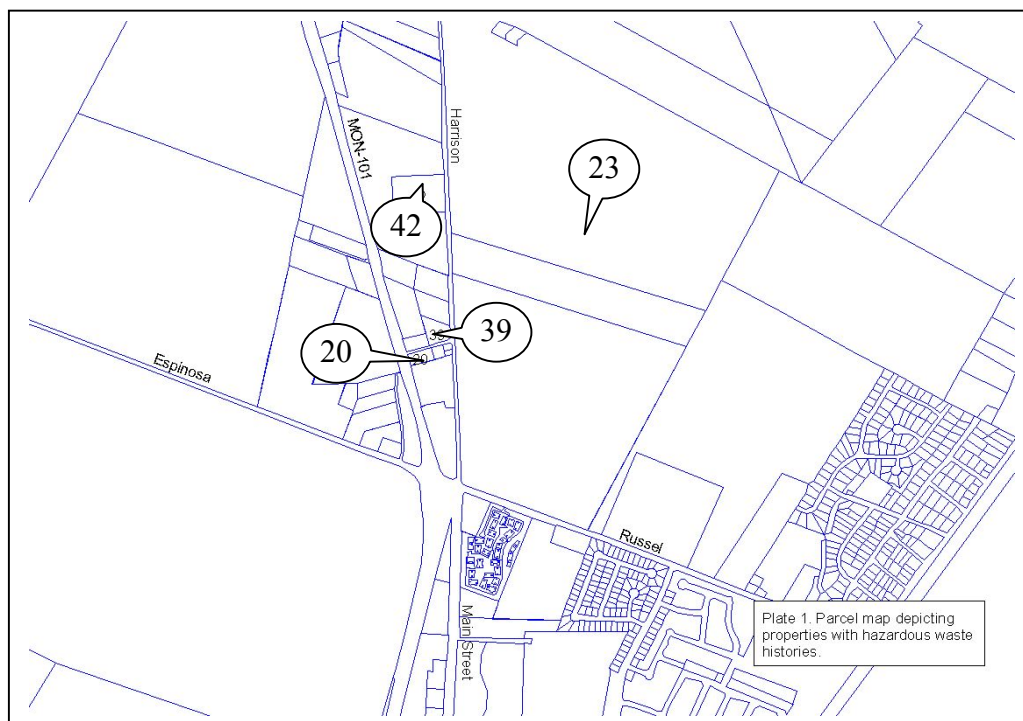
In addition to the acts listed above, Executive Order 12088, Federal Compliance with Pollution Control, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

Hazardous waste in California is regulated primarily under the authority of the federal Resource Conservation and Recovery Act of 1976 and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during project construction.

3.10.2 Affected Environment

A Preliminary Site Investigation and Initial Site Assessment were conducted for the project (October 2, 2003). Within the project limits, nine properties identified as potentially containing hazardous waste/materials were evaluated. The identified waste/materials included several underground storage tanks, an auto body paint shop, an oil spill, and a waste oil and ethylene glycol storage facility. The following maps indicate the locations of the nine properties (shown from south to north).



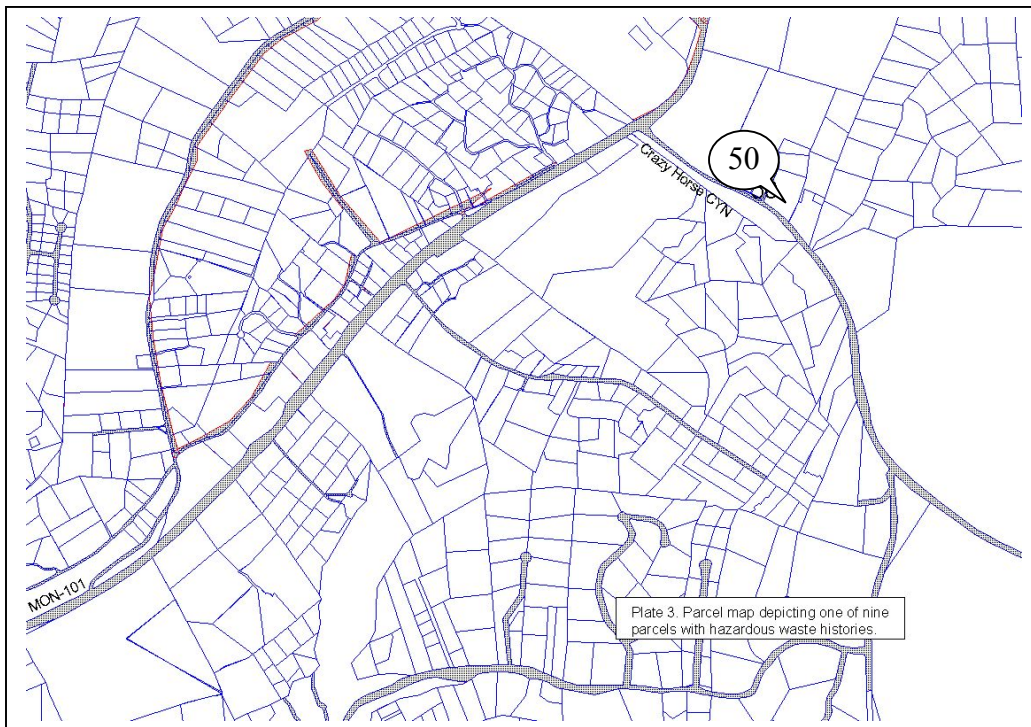
Note: Figure revised for final document

Figure 3-28a Potential Hazardous Waste Sites



Note: Figure revised for final document

Figure 3-28b Potential Hazardous Waste Sites



Note: Figure revised for final document

Figure 3-28c Potential Hazardous Waste Sites

Table 3.6 Potential Hazardous Waste Risk Assessment

Map ID #	Proposed for Acquisition	Concern	Risk Status
09	No	Former gas station	No risk, Monterey County Department of Environmental Health closed case
15	No	Facilities with historical usage of hazardous materials	No risk, no project activity would occur on the property.
25	No	Potential spills of hazardous solvents, hydrocarbon oil and grease or paint	Low risk, no indication of leaking storage containers
39	No	Underground storage tanks properly removed	Low risk, storage tanks were properly removed. There is no indication of past leakage
42	No	Potential spills of hydrocarbon oil or grease and pesticides	Low risk, inspections do not indicate the presence of spills or leaks
50	Yes	Potential spills of hydrocarbon oil or grease and pesticides	Low risk, inspections do not indicate the presence of spills or leaks
20	Yes	Potential spills of hazardous chemicals	Low risk, stringent guidelines enforced and there is no indication of past or current spills or leaking storage containers
23	Yes	Potential spills of hydrocarbon oil or grease and pesticides	Low risk, there is no indication of past or current spills or leaking storage containers
37	Yes	Potential spills of hydrocarbon oil or grease and pesticides	Low risk, there is no indication of past or current spills or leaking storage containers

All nine sites identified on the preceding maps are within the Prunedale Improvement Project study area. The project would require acquisition of four of the nine parcels identified (see Table 3.6). It is unlikely any hazardous waste would be encountered on these four parcels (see “Risk Status” column in table). Project work would not occur near enough to the other five parcels, which would not be acquired, to be affected by potential hazardous waste/materials.

3.10.3 Impacts

The project was designed to avoid potential hazardous waste/materials sites.

The No-Build Alternative would not affect any potential hazardous waste/material sites.

3.10.4 Avoidance, Minimization, and/or Mitigation Measures

Remediation measures would not be anticipated.

3.11 Air Quality

Air quality varies from region to region and is evaluated based on foreign matter in the air.

3.11.1 Regulatory Setting

The Clean Air Act, as amended in 1990, is the federal law that governs air quality. Its counterpart in California is the California Clean Air Act of 1988. These laws set standards for the concentration of pollutants that can be in the air. At the federal level, these standards are called National Ambient Air Quality Standards. Standards have been established for six criteria pollutants that have been linked to potential health concerns; the criteria pollutants are: carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM), lead (Pb), and sulfur dioxide (SO₂).

Under the 1990 Clean Air Act Amendments, the U.S. Department of Transportation cannot fund, authorize, or approve Federal actions to support programs or projects that are not first found to conform to the State Implementation Plan for achieving the goals of the Clean Air Act requirements. Conformity with the Clean Air Act takes place on two levels—first, at the regional level and second, at the project level. The proposed project must conform at both levels to be approved.

Regional level conformity is concerned with how well the region is meeting the standards set for carbon monoxide, nitrogen dioxide, ozone, and particulate matter. California is in attainment for the other criteria pollutants. At the regional level, Regional Transportation Plans are developed that include all of the transportation projects planned for a region over a period of years, usually at least 20. Based on the projects included in the Regional Transportation Plan, an air quality model is run to determine whether or not the implementation of those projects would conform to emission budgets or other tests showing that attainment requirements of the Clean Air Act are met. If the conformity analysis is successful, the regional planning organization, such as the Transportation Agency For Monterey County (TAMC) and the appropriate federal agencies, such as the Federal Highway Administration, make the determination that the Regional Transportation Plan is in conformity with the State Implementation Plan for achieving the goals of the Clean Air Act. Otherwise, the projects in the Regional Transportation Plan must be modified until conformity is attained. If the design and scope of the proposed transportation project are the same as described in the Regional Transportation Plan, then the proposed project is deemed to meet regional conformity requirements for purposes of the project-level analysis.

Conformity at the project-level also requires “hot spot” analysis if an area is in “nonattainment” or “maintenance” for carbon monoxide (CO) and/or particulate matter. A region is a “nonattainment” area if one or more monitoring stations in the region fail to attain the relevant standard. Areas that were previously designated as non-attainment areas but have recently met the standard are called “maintenance” areas. “Hot spot” analysis is essentially the same, for technical purposes, as carbon monoxide or particulate matter analysis performed for National Environmental Policy Act and California Environmental Quality Act purposes. Conformity does include some specific standards for projects that require a hot spot analysis. In general, projects must not cause the carbon monoxide standard to be violated, and in “nonattainment” areas, the project must not cause any increase in the number and severity of violations. If a known carbon monoxide or particulate matter violation is located in the project vicinity, the project must include measures to reduce or eliminate the existing violation(s) as well.

3.11.1.1 Regional Air Quality Conformity

The proposed project is fully funded and is in the 2005 Monterey County Regional Transportation Plan. The plan was approved by the Transportation Agency for Monterey County at its May 25, 2005 board meeting. The project is listed in the financially constrained Monterey County Regional Transportation Plan on page one, Appendix D. It is listed at \$224,560,000 in the first five years (present to 2010) of the plan.

3.11.2 Affected Environment

The project is located in the North Central Coast Air Basin, which is comprised of Monterey, Santa Cruz, and San Benito counties. The basin lies along the central coast of California covering an area of 5,159 square miles, and is bordered by the Santa Cruz Mountains to the northwest, the Diablo Mountain Range to the northeast, the Gabilan Mountain Range to the east, and the Santa Lucia Mountain Range to the west.

The semi-permanent high-pressure cell in the eastern Pacific is the basic controlling factor of the climate in the air basin. In summer, the cell is dominant and causes persistent west and northwest winds over the entire California coast. Air descends in the Pacific forming a stable temperature inversion of hot air over a cool coastal layer of air. The onshore air currents pass over cool ocean waters to bring fog and relatively cool air into the coastal valleys. The warmer air aloft acts as a lid to inhibit vertical air movement. In the fall, the Pacific high-pressure cell moves south causing surface

wind speeds to lessen, with the marine layer becoming shallow, dissipating altogether on some days. Air quality is generally good in the basin during the summer and fall. The dominant inversion layer during these seasons can lead to a build-up of air pollutants over a few days, but the persistent strong onshore winds usually blow air pollutants away in a short timeframe.

During the winter, the Pacific high-pressure cell moves even further south and has even a less influence on the air basin. Northwest winds are still dominant in the winter, but air frequently flows offshore, especially during night and morning hours. The general absence of persistent inversion layers and the occasional storm systems result in good air quality for the basin as a whole in winter and spring.

Caltrans prepared an Air Quality Analysis Report (April 22, 2004) to determine air quality in the project area and to identify specific relevant pollutants. Attainment means that a region is in compliance with established limits for emissions. Non-attainment refers to emissions that exceed established thresholds.

The proposed project is located in Monterey County in the North Central Coast Air Basin. Table 3.7 indicates Monterey County's attainment status under federal and state air quality standards.

Table 3.7 Monterey County Air Quality

Criteria Pollutant	Federal Standard (National Ambient Air Quality Standards)	Federal Attainment Status	State Standard	State Attainment Status
Sulfur Dioxide (SO ₂)	.03 ppm (annual average) .14 ppm (24-hour average)	Unclassified	.25 ppm (1-hour average) .04 ppm (24-hour average)	Attainment
Carbon Monoxide (CO)	35 ppm (1-hour average) 9 ppm (8-hour average)	Unclassified/ Attainment	20 ppm (1-hour average) 9 ppm (8-hour average)	Attainment
Nitrogen Dioxide (NO ₂)	.053 ppm (1-hour average)	Unclassified/ Attainment	0.25 ppm (1-hour average)	Attainment
Ozone (O ₃)	0.12 ppm (1-hour average)	Maintenance	0.09 ppm (1-hour average)	Moderate Non-Attainment
Particulate Matter (PM _{2.5})	15 µg/m ³ (annual average) 65 µg/m ³ (24-hour average)	Attainment	12 µg/m ³ (annual average)	Attainment
Particulate Matter (PM ₁₀)	150 µg/m ³ (annual arithmetic mean)	Attainment	50 µg/m ³ (annual arithmetic mean)	Non-Attainment

Source: MBUAPCD CEQA Air Quality Guidelines
PPM = parts per million

In addition to the criteria pollutants discussed above, the Environmental Protection Agency also regulates air toxins, including particulate matter contained in diesel exhaust. Diesel engine exhaust contains a complex mixture of gases and particulates that have raised concerns about their potential for adverse health effects. Human exposure to diesel engine exhaust comes from both highway and non-highway sources. Studies of the risks are inconclusive, however, and the U.S. Environmental Protection Agency has yet to establish air quality standards or guidelines for assessing the project level effects of mobile air toxins. Such limitations make the study of mobile air toxic concentrations, exposures, and health impacts difficult and uncertain, especially on a quantitative basis. Effective mobile source reduction can only be achieved with fleet regulation.

3.11.3 Impacts

The proposed project is included in the 2005 Monterey County Regional Transportation Plan, and is thereby in conformity with state and federal air quality standards for ozone. The design concept and scope of the project are consistent with that assumed in the regional emission analysis developed by the Association of Monterey Bay Area Governments in cooperation with the Monterey Bay Unified Air Pollution Control District. For a transportation project to be listed in the regional transportation plan, it must conform to the state plan for attaining ambient air quality standards. The project has met these requirements and is compliant with the State Implementation Plan for ozone, as provided in the 1997 U.S. Environmental Protection Agency's Transportation Conformity Rule and Rule 9120 (Transportation Conformity).

Implementation of the proposed project would not worsen any existing violation or create any new localized violations of particulate matter or carbon monoxide standards.

With the No-Build Alternative, multiple direct access points would remain. Vehicles would continue to idle waiting to turn on to or off Route 101. Potentially negative effects on air quality could result.

3.11.3.1 Construction Phase Impacts

During construction, the proposed project would generate temporary air pollutants. The exhaust from construction equipment contains hydrocarbons, oxides of nitrogen, carbon monoxide, suspended particulate matter, and odor. However, the largest percentage of pollutants would be windblown dust generated during excavation,

grading, hauling, and various other activities. The impact of these activities would vary each day as construction progresses. The impacts of these activities close to the right-of-way could cause occasional annoyance and complaints.

Caltrans will take all minimization measures listed in Caltrans Standard Specifications to reduce particulate emissions during construction.

The No-Build Alternative would not generate temporary air pollutants from construction. Exposure to air toxins, however, would differ little between the Build and No-Build alternatives.

3.11.3.2 Cumulative Impacts

An evaluation of the project and project area has determined that this project would not substantially contribute to regional-scale air pollutants and would have no major adverse impacts on exterior carbon monoxide levels.

3.11.4 Avoidance, Minimization, and/or Mitigation Measures

To minimize construction-related impacts to air quality, the contractor would be required to comply with all local air quality regulations and ordinances. Dust would be controlled by standard construction practices such as spraying disturbed areas with water, limiting work on windy days, and using erosion control measures during and after construction. Daily watering will be implemented. When daily watering is insufficient to minimize particulate emissions, the Resident Engineer, at their discretion, would require the contractor to use appropriate measures:

- Prohibit all grading activities during periods of high wind (over 24.1 kilometers per hour [15 miles per hour]).
- Apply non-toxic binders to exposed areas after cut and fill operations and hydro-seed area.
- Haul trucks would maintain at least 0.6 meters (2.0 feet) of freeboard.
- Cover all trucks hauling dirt, sand, or loose materials.
- Plant vegetative cover in disturbed areas as soon as possible.
- Cover inactive storage piles.
- Sweep streets if visible soil is carried out of the construction site.
- Limit the area of construction at any one time.

3.12 Noise

Noise is defined as unwanted sound. A number of factors affect sound perceived by the human ear, including the level of sound, the frequencies involved, the period of exposure, and the changes or fluctuations in the noise levels during exposure. Levels of sound are measured in terms of decibels (dB). Since the human ear cannot perceive all frequencies equally well, measured sound levels are often adjusted, or weighted, to correspond to human hearing. This adjusted unit is known as the A-weighted decibel, or dBA. All references to sound levels in this report refer to A-weighted decibels.

Sound in our daily environment fluctuates over time. One way of describing fluctuating sound over a specific time period is the present the changing levels of sound as if it had been at a steady unchanging level for the time period. A descriptor called the equivalent sound level, Leq , is used to represent a constant level of sound that contains the same amount of acoustical energy as a fluctuating sound would generate in a given time period. Since highway traffic noise impacts are evaluated by using the average noise levels at sensitive receivers during the worst, or the noisiest one hour period of the day, the sound level equivalents of the acoustical energy received in one hour is the descriptor used for this purpose, which is represented as $Leq(h)$.

Decibels are logarithmic units. A doubling of the number of noise sources, such as cars on a roadway, increases the noise levels by 3 dBA. A ten-fold increase in the number of noise sources adds 10 dBA to the noise levels. For every doubling of distance between the noise source and the receptor, traffic noise would decrease by 3 dBA over hard ground (paved surface) or 4.5 dBA over soft ground (vegetated or plowed soil). Furthermore, with normal human hearing, an increase of 10 dBA in sound levels is perceived as twice as loud, while a change of 3dBA is barely perceivable.

3.12.1 Regulatory Setting

The National Environmental Policy Act (NEPA) of 1969 and the California Environmental Quality Act (CEQA) provide the broad basis for assessing noise impacts from a proposed project and considering abatement and/or mitigation if appropriate. The intent of these laws is the same: to promote the general welfare and

to foster a healthy environment. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between NEPA and CEQA.

CEQA requires a no-build versus build analysis to assess whether a proposed project will have a noise impact. If a proposed project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless such measures are not feasible.

For purpose of the National Environmental Policy Act (NEPA), the Federal Highway Administration follows Title 23 (Highways) of the Code of Federal Regulations Section 772. Some federally-funded projects, generally projects involving the addition of new lanes to an existing facility or construction of a new facility on a new alignment, are classified as Type 1. Under FHWA regulations (23 CFR 772), noise abatement must also be considered for Type 1 highway transportation projects when the project results in a substantial noise increase or when existing or predicted future noise levels approach or exceed the defined Noise Abatement Criteria (Table 3.8).

Under NEPA/23 CFR 772, noise abatement measures that are determined to be reasonable and feasible at the time of final design, and that are desired by 50 percent of the affected property owners, may be incorporated into the project plans and specifications. A minimum 5-dBA reduction in the future noise level must be achieved for an abatement measure to be considered feasible. Other considerations for feasibility include topography, access requirements, other noise sources, and safety considerations. The reasonableness determination is a cost-benefit analysis. Factors used in determining whether a proposed noise abatement measure is reasonable include: residents' acceptance, the absolute noise level, future versus existing noise, environmental impacts of abatement, public and local agencies input, newly constructed development versus development pre-dating 1978, and the cost per benefited residence.

Table 3.8 Activity Categories and NEPA/23 CFR 772 Noise Abatement Criteria

Activity Category	NEPA/23 CFR 772 Noise Abatement Criteria, A-weighted Noise Level, Average Over One Hour	Description of Activity Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	Picnic areas, recreation areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (Exterior)	Developed lands, activities not included in Categories A or B above.
D	--	Undeveloped lands.
E	52 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

Source: Caltrans Traffic Noise Analysis Manual, 1998
A-weighted decibels are adjusted to approximate the way humans perceive sound

The following figure is to aid in understanding noise levels by comparing them to common activities.

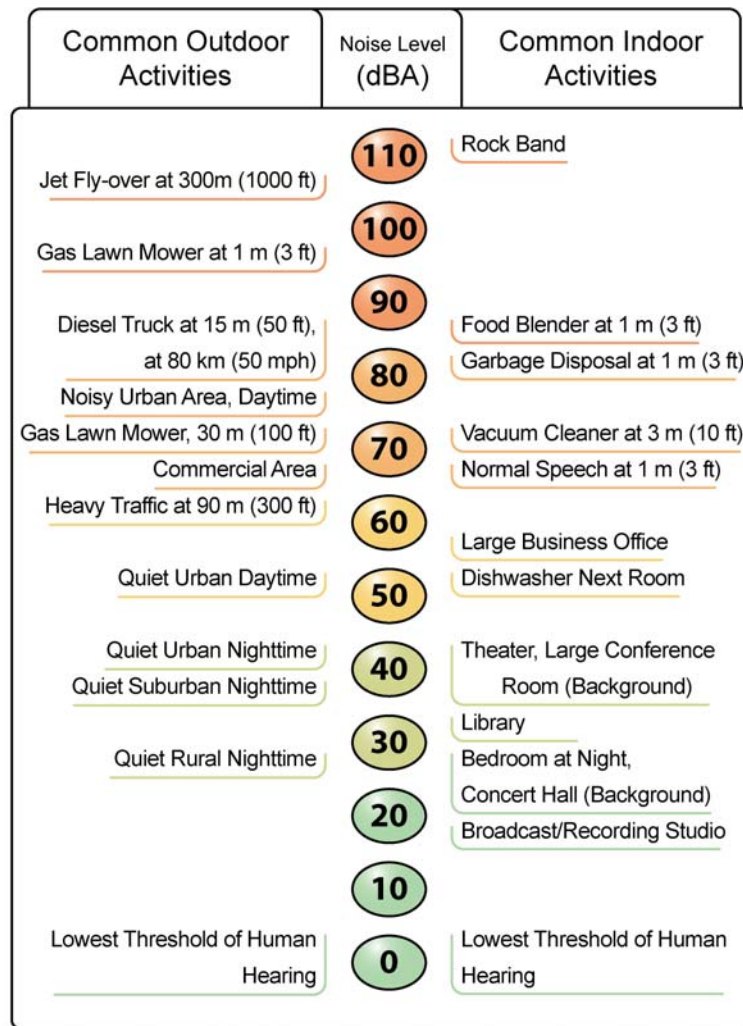


Figure 3-29 Noise Level Equivalents

3.12.2 Affected Environment

Caltrans prepared a Noise Technical Report, which was recently updated (February 2006) using year 2004 existing traffic to predict existing peak hour noise levels. Future year traffic predictions and updated information on the relationship between receptors and the profile of the proposed highway improvements were also considered. The Noise Technical Report determines the project's potential to have noise impacts on the surrounding environment. Two additional receptors that were not in the draft environmental document have been included in the discussion to serve to better communicate the noise levels at specific locations (1a and 2a). The receptor numbering has changed, and 6c is no longer discussed since the project does not propose to alter the alignment or add lanes at this location.

The project is located in a rural area, surrounded by farmland at the southern portion and rolling hills at the central and northern portions. Businesses and residences are located adjacent to Route 101 intermittently throughout the project area.

The Noise Technical Report indicates that 2004 existing noise levels in the project area range from 62 to 81 dBA. Whereas using year 2000 traffic levels the previous report indicated a range of 62 to 79 dBA.

As shown in Table 3.10, existing conditions at 12 of the 16 receptor locations (1, 1a, 2, 2a, 3, 4, 5, 6a, 6c, 9,10, 11) meet or exceed the Noise Abatement Criterion of 67 dBA (for residences).

3.12.3 Impacts

A Traffic Noise Analysis was conducted for 15 receptors, which represent numerous residences in each of the areas affected by the project (Figures 3-30, 3-31, and 3-32). Predictions for existing and future traffic noise levels on these receptors were made by using the *LeqV2 San Francisco Highway Traffic Noise Prediction Model* and *Caltrans Sound 2000* software, which is compatible with the (NEPA/23 CFR 772) Federal Highway Administration's traffic noise prediction model. Table 3.10 indicates the existing noise levels, along with Build verses No-Build noise levels at 15 receptor locations.

A maximum 3-dBA increase between existing noise levels and the build alternative would result at any receptor location, a change which is barely perceptible to the human ear. Therefore, under CEQA, no noise impact would occur as a result of the project.

Under NEPA/23 CFR 772, because the noise levels at many of the receptors is already high, the noise abatement criteria will be approached or exceeded at multiple locations. In the design year 2030, even without construction of any project, 12 of the 15 receptors studied (1,1a, 2, 2a, 3, 4, 5, 6a, 6b, 6c 7, 9,10,11) would approach or exceed the Noise Abatement Criterion of 67 dBA for residences and schools (Table 3.10).



Note: Figure revised 11/05

Figure 3-30 NEPA/23 CFR 772 Barriers Considered for Noise Receptors 1 through 5

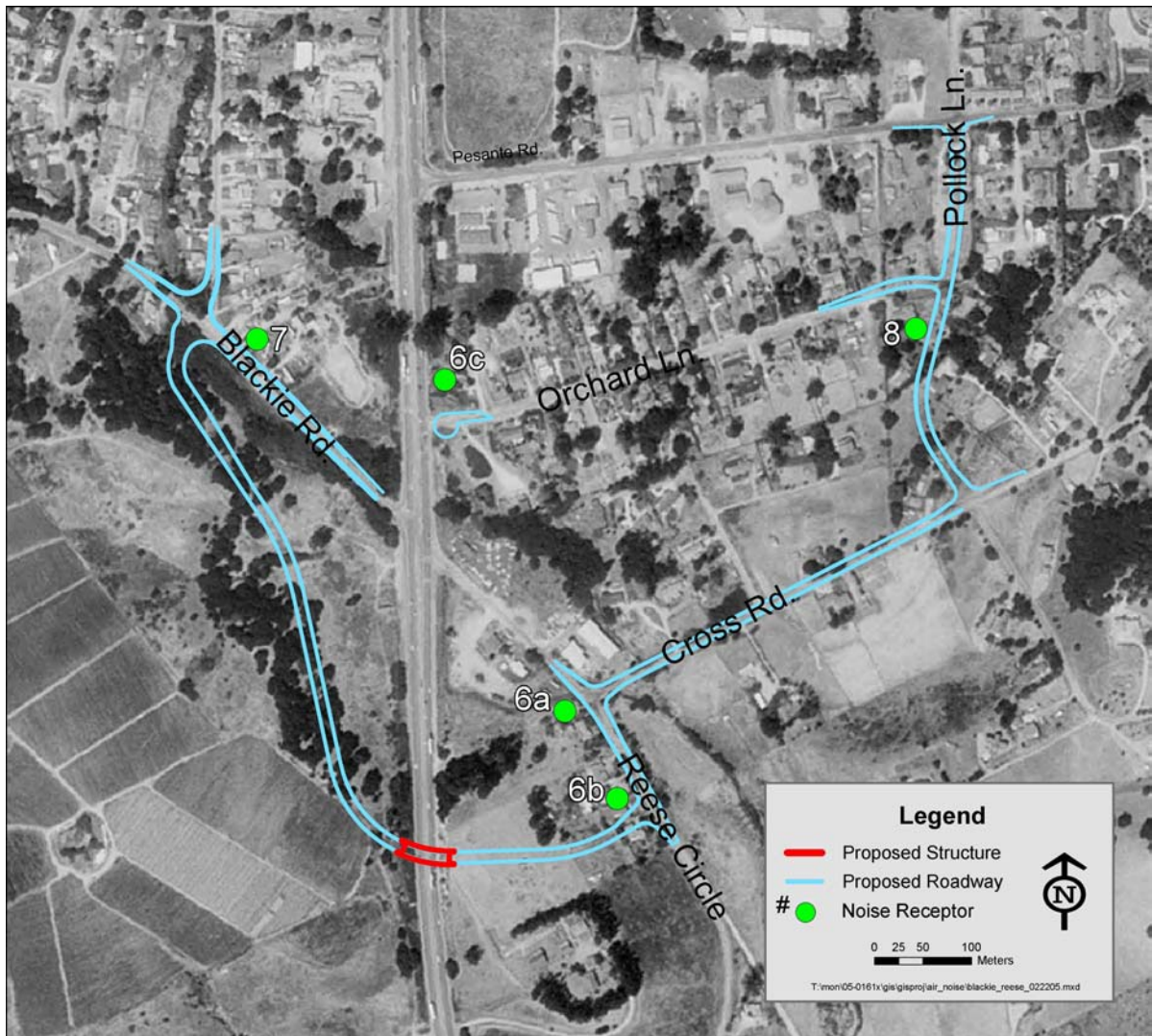


Figure 3-31 Noise Receptors 6 through 8

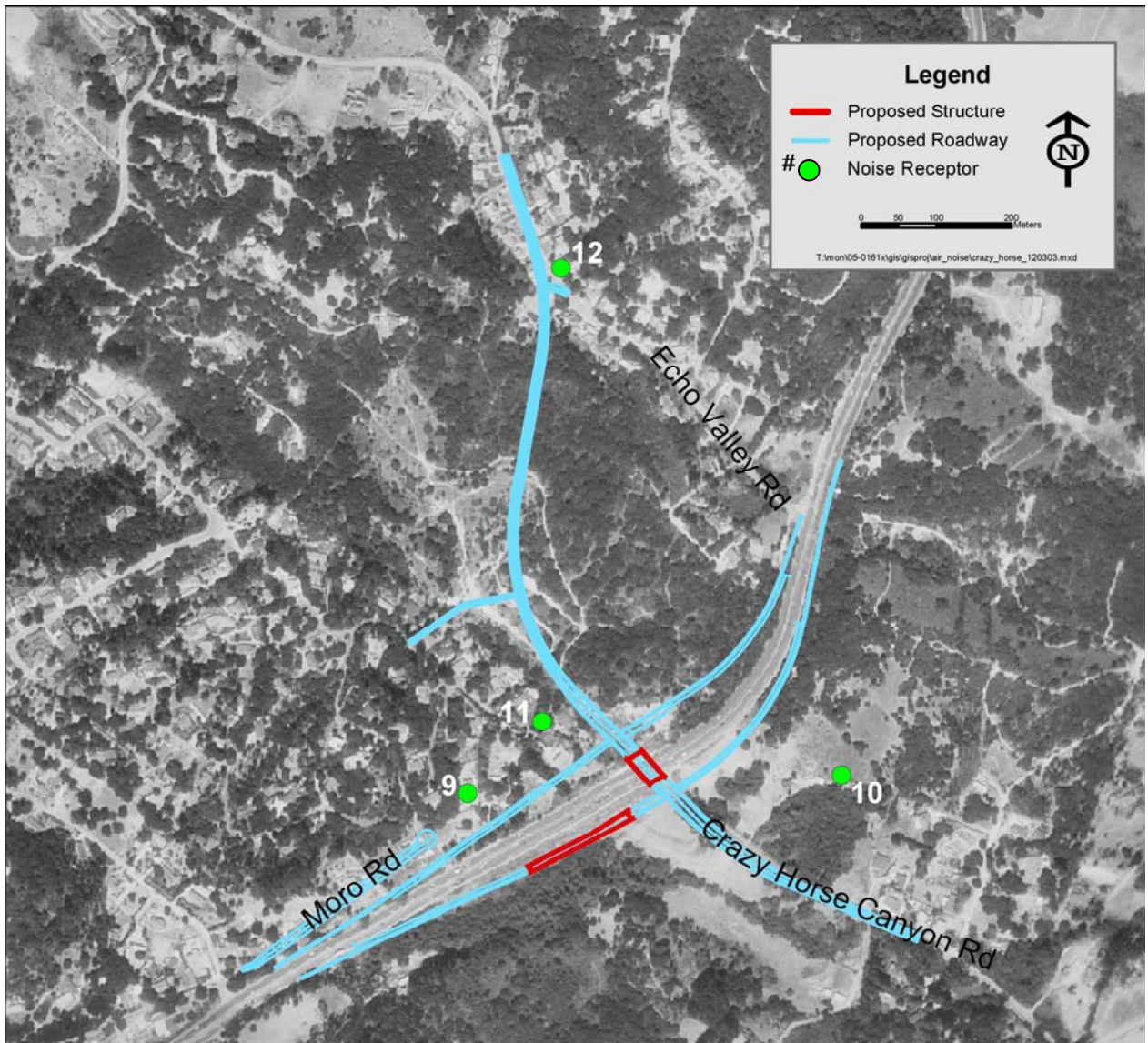


Figure 3-32 Noise Receptors 9 through 12

Table 3.9 Existing and Predicted Noise Levels

Receptor # (For Locations See Figures 3.30, 3.31, and 3.32)	Existing Noise Level (2004)	Predicted Noise Level without Project (dBA) (2030)	Predicted Noise Level with Project (dBA) (2030)	Predicted Noise Level with Abatement (dBA) Determined under NEPA/23 CFR 772				Feasible under NEPA/23 CFR 772
				10'	12'	14'	16'	
1	81	82	82	73*	73	73	73	Yes
1a	74	75	75	70*	69	68	68	Yes
2	77	78	77	70*	70	70	70	Yes
2a	73	74	73	Separate Noise barrier not feasible				
3	74	75	71	65*	64	62	61	Yes
4	75	76	72	64*	63	62	61	Yes
5	78	79	79	72	70	68*	67	Yes
6a	67	68	70	Noise barriers at these locations not warranted, or not reasonable or feasible				
6b	65	66	68					
6c	78	80	80					
7	66	67	69					
8	63	64	64					
9	70	71	62					
10	68	69	66					
11	72	73	60					
12	62	63	64					

dBA = decibels on the A weighted scale (weighted for the human ear's response to sound).

* Indicates recommended barrier height.

Source: 2/14/06 Noise Technical Report, existing noise levels were determined using 2004 traffic data. Note that receptor numbers have changed from the Draft Environmental Document (1=1, 1a and 2=2a, and 2 is new)

The following discusses the potential impacts on the receptors in the project area:

1. Receptor 1 and 1a both represent 16 homes located south of Russell Road between N. Main Street and Route 101 (Figure 3-30). Receptor 1 represents noise measurements taken from a position closer to Route 101 than Receptor 1a. Calculations of peak hour traffic noise levels at Receptor 1 and 1a indicate that the existing noise level at these locations are 81 and 74 dBA, respectively. The year 2030 noise level at this location, with and without the project, are predicted to be 82 dBA for Receptor 1 and 75 dBA for Receptor 1a. Predictions for future traffic noise levels are based on future predicted traffic volumes and distances from sensitive receptors. Because the future noise level exceeds the noise abatement criterion for residential uses (67 dBA), the 16 residences represented by both Receptor 1 and 1a would be adversely affected by noise.
2. Receptor 2 represents 3 residences located north of Receptor 1 and 1a, and south of Russell Road between N. Main Street and Route 101 (Figure 3-30). Existing noise levels are 77 dBA. The contribution from N. Main Street is 62 dBA.

Predictions for future noise levels are based on future predicted traffic volumes and distances from sensitive receptors. The year 2030 noise level at this location, with the project constructed, is predicted to be 77 dBA. Because the future noise level exceeds the noise abatement criterion for residential uses (67 dBA), the 3 residences represented by Receptor 2 would be adversely affected by noise.

3. Receptor 2a represents residences east of Main Street (Figure 3-30).

Measurements of peak-hour traffic noise levels were taken at Receptor 2a and indicate that the existing noise level at this location is 73 dBA. Noise modeling indicates that the 2030 noise levels with the project at Receptor 2a would be 72 dBA from the Route 101 freeway and 68 dBA from Main Street, which equates to a combined 73 dBA. Because the future noise level exceeds the noise abatement criterion for residential uses (67 dBA), the condominiums represented by Receptor 2a would be adversely affected by noise.

4. Receptors 3 and 4 represent 12 homes located adjacent to Route 101, on the west side of the highway and just north of Espinosa Road (Figure 3-30). Measurements of peak-hour traffic noise levels were taken at Receptors 3 and 4. The readings indicate that the existing noise level at these locations is 74 and 75 dBA.

Predictions for future traffic noise levels are based on future predicted traffic volumes and distances from sensitive receptors. The future (year 2030) noise level at these locations, with the project constructed, is predicted to be 71 and 72 dBA respectively. The reduction in noise levels with construction of the project is because the profile of the highway is raised about 31 feet above existing ground level at this location. Yet the future noise levels do exceed the noise abatement criterion for residential uses (67 dBA), so the 12 homes represented by Receptors 3 and 4 would be adversely affected by noise.

5. Receptor 5 represents 18 homes located adjacent to Route 101 and White Road (Figure 3-30). Measurements for traffic noise levels taken at Receptor 5 indicate that the existing peak-hour noise level at this location is 78 dBA. Predictions for future traffic noise levels are based on future predicted traffic volumes and distances from sensitive receptors. The future (year 2030) noise level at this location, with the project constructed, is predicted to be 79 dBA. Because the future noise level exceeds the noise abatement criterion for residential uses (67 dBA), the 18 homes represented by Receptor 5 would be adversely affected by noise.

6. Receptors 6a and 6b represent residences west of Reese Circle and east of Route 101 near the new connection on Reese Circle (Figure 3-31). Year 2030 predicted traffic noise would take Receptor 6a from an existing 67-dBA level to 70 dBA

- with the project. Receptor 6b is predicted to increase from an existing noise level of 65 dBA to 68 dBA in 2030 under the same conditions. Because future noise levels for Receptor 6a meet or exceed the noise abatement criterion for residential uses (67 dBA), those homes would be adversely affected by noise.
7. Receptor 7 represents homes along Blackie Road over 200 feet west of Route 101 (Figure 3-31). Existing noise levels of 66 dBA are predicted to increase to 69 dBA by 2030 with the project. Because the future noise level exceeds the noise abatement criterion for residential uses (67 dBA), the homes represented by Receptor 7 would be adversely affected by noise.
 8. Receptor 8 currently experiences a peak noise level of 63 dBA, which is below the noise abatement criterion of 67 dBA. Homes in the area of Receptor 8 (Figure 3-31) would not be adversely affected by noise as the predicted increase in 2030 to 64 dBA remains below the noise abatement criterion.
 9. Receptors 9 and 11 represent homes west of Route 101 and south of the new Echo Valley Road connection to Crazy Horse Canyon Road (Figure 3-32). Existing noise levels at Receptor 9 are predicted to be 70 dBA as of 2004 traffic levels. Receptor 11 is predicted at 72 dBA in the same conditions. In design year 2030, traffic noise with construction of the project is predicted to be 62 dBA at Receptor 9 and 60 dBA at Receptor 11. With the project construction, the newly proposed southbound on- and off-ramps would act as a berm, reducing the peak noise levels to below the noise abatement criteria. Therefore, these two receptor locations are not being adversely affected by noise.
 10. Receptor 10 represents homes in the area north of Crazy Horse Canyon Road and over 200 feet east of Route 101 (Figure 3-32). Existing noise levels in this area are at 68 dBA. In 2030, with construction of the project, 66 dBA (a 2 dBA reduction) is predicted, because much like with Receptors 9 and 11, the proposed improvements would act as a berm, and would reduce highway traffic noise levels at these receptors.
 11. Receptor 12 represents homes on existing Echo Valley Road west of Route 101 near where the new connection to Crazy Horse Canyon Road would break away (Figure 3-32). Both existing (62 dBA) and predicted future noise levels with or without the project (64 dBA) would be below the noise abatement criterion.

Under both NEPA and CEQA, construction noise has the potential to cause additional noise impacts to residences in the vicinity of the proposed improvements. Normal construction activity can generate noise levels up to 90 dBA at 15.2 meters (50 feet) from the equipment. Extraordinary construction activity like pavement breaking and

pile driving can cause peak noise levels up to 110 dBA. Caltrans policy on “normal” construction activity is that it should not emit more than 86 dBA at 15.2 meters (50 feet) from the source. Since noise from a “point source” like construction equipment drops off at a rate of 6 to 7.5 dBA per distance doubled, residences within 183 meters (600 feet) of the source can experience noise impacts (above 67 dBA) from construction activities.

Noise levels with the No-Build Alternative, at all receptors, would be about 3 dBA louder than existing levels in the project design year (2030) due to predicted traffic increases on Route 101. There would be no temporary noise due to construction associated with the No-Build Alternative.

3.12.4 Avoidance, Minimization, and/or Abatement Measures

Since there will be only a 3 dBA increase in noise level over the existing condition at any of the 15 receptor locations, in the year 2030 with construction of the project, there is no noise impact that requires mitigation under CEQA.

Under NEPA/23 CFR 772, when a build alternative, in the design year, increases noise levels at least 12 dBA, defined as a substantial increase, or when the existing or future noise levels approach or exceed the noise abatement criteria (67 dBA for residential, and 72 for commercial), then noise abatement is considered. Although as Table 3.10 indicates no substantial (12 dBA) increase has been identified, 10 of the 15 receptors (1, 1a, 2, 2a, 3, 4, 5, 6a, 6b and 7) are anticipated, to approach or exceed the NEPA/23 CFR 772 noise abatement criteria. FHWA and Caltrans does not generally provide noise abatement for commercial receptors.

Under NEPA/23 CFR 772, to be considered for incorporation into the project, the noise abatement must also be considered feasible and reasonable. To be considered feasible, it must achieve a minimum of at least a 5-dBA reduction. To be considered reasonable, the cost of the noise abatement measure must not exceed the cost allowance, determined by number and type of affected properties.

The 10 receptors expected to approach or exceed the noise abatement criteria (1, 1a, 2, 2a, 3, 4, 5, 6a, 6b, 7) are discussed in the following. Abatement for 6 receptors (1, 1a, 2, 3, 4, and 5) is considered feasible and reasonable under NEPA/23 CFR 772.

1. Receptor 1 and 1a. Based on the studies completed to date, Caltrans and the Federal Highway Administration intend to incorporate noise abatement in the form of a noise barrier (B1 south, Figure 3-30) on the east side of Route 101. The barrier would be 656 feet long and 10 feet high. Calculations based on preliminary design data indicate that the barrier would reduce noise levels by up to 9 dBA for 16 residences. The current estimated cost of the barrier at this location is \$72,160. The total reasonable cost allowance is \$736,000; therefore, the barrier is feasible and reasonable in accordance with Caltrans *Traffic Noise Analysis Protocol*, and will likely be incorporated into the project.
2. Receptor 2. Based on the studies completed to date, Caltrans and the Federal Highway Administration intend to incorporate noise abatement in the form of a noise barrier (B1 north, Figure 3-30) located on the east side of Route 101, south of Espinosa Road. The barrier would be 548 feet long and 10 feet high. Calculations based on preliminary design data indicate that the barrier would reduce noise levels about 8 dBA for 3 residences. The current estimated cost of the barrier at this location is \$60,280. The reasonable cost allowance is \$132,000; therefore, the barrier is feasible and reasonable, and will likely be incorporated into the project.
3. Receptor 2a. A barrier, if constructed along the eastern edge of Main Street, is not feasible because it would be necessary to create several driveway access points, which would negate the effectiveness of any barrier. No barrier is proposed at this location.
4. Receptors 3 and 4. Based on the studies completed to date, Caltrans and the Federal Highway Administration intend to incorporate noise abatement in the form of a noise barrier (B3, Figure 3-30) located on the west side of Route 101, north of Espinosa Road. The barrier would be 1,245 feet long and 10 feet high. Calculations based on preliminary design data indicate that the barrier would reduce noise levels by 6 to 8 dBA for residences represented by Receptors 3 and 4. The current estimated cost of the barrier at this location is \$187,500. The reasonable cost allowance is \$528,000; therefore, the barrier is feasible and reasonable, and will likely be incorporated into the project.
5. Receptor 5. The noise level is expected to increase by 1 dBA (from existing 78 dBA to predicted 79 dBA) exceeding the noise abatement criteria of 67 dBA for the 18 homes. Based on the studies completed to date, Caltrans and the Federal Highway Administration intend to incorporate noise abatement in the form of a noise barrier (B4, Figure 3-30) located on the east side of Route 101 north and south of White Road. The barrier would be 1,745 feet long and an average of 14

feet high. Calculations based on preliminary design data indicate that the barrier would reduce noise levels about 11 dBA for 18 residences. The estimated cost of the barrier at this location is \$482,000. The reasonable cost allowance is \$864,000; therefore, the barrier is feasible and reasonable, and will likely be incorporated into the project.

6. Receptors 6a and 6b. A noise barrier at this location was considered since the noise levels with the build alternative are expected to increase, exceeding the noise abatement criteria. Yet because of the need to create driveway access points through the barrier to access Reese Circle, a noise barrier at this location is not feasible.
7. Receptors 7 and 10. Receptor 7 is currently and would be adversely affected by noise. The distance between this receptor and a barrier within the Route 101 right-of-way, however, would be too great to be effective and a barrier on the local road would be made infeasible by the number of access openings required. Receptor 10 would be reduced two dBA by the project improvements to be below the noise abatement criteria for residences. No barrier is proposed.
8. Receptors 8 and 12. Both are not adversely affected by noise, and no barrier is proposed to protect residences in these locations because the predicted noise level in 2030 is below the noise abatement criterion of 67 dBA.
9. Receptors 9 and 11. Both are not adversely affected by noise and no barriers are proposed to protect residences in these locations, as the project's proposed southbound on- and off-ramps would reduce the peak noise levels to below the noise abatement criterion of 67 dBA.

For purposes of NEPA/23 CFR 772, if, during final design, the conditions above have substantially changed, the abatement measures might not be provided. A final decision on the installation of abatement measures would be made upon completion of the project design and the public involvement processes.

Night construction is expected with the proposed project. The following actions are recommended to minimize noise impacts from construction activity:

- Notices would be published in local news media of the dates and duration of the proposed construction activities. A telephone number for the Resident Engineer's office would be included.
- When possible, noisier construction activities would be scheduled during the earlier parts of the evening or afternoon.

- Temporary sound barriers can be constructed where construction activities would be conducted near residents or where complaints have been received.
- When early construction of sound barriers would not interfere with construction activities, the proposed sound barriers would be constructed ahead of other project activities.
- When construction noise levels of 75 dBA or more would be experienced by residents for more than two nights, the resident engineer would consider providing motel accommodations for the affected residents.

Biological Environment

The biological environment for a proposed project includes plant and animal species, habitat types, and wetlands. Figure 3-33 shows the community types and biological environment study area for the project.

3.13 Natural Communities

3.13.1 Regulatory Setting

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act are discussed in the Threatened and Endangered Species Section 3.17. Wetlands and other waters are discussed in Section 3.14.

3.13.2 Affected Environment

The most common plant communities in upland areas are Annual Grassland and Coast Live Oak Woodland, followed by inclusions of Central Maritime Chaparral on hilltops and steep slopes, intergrading with Central Coastal Scrub. Central Coast Riparian Scrub is found along Prunedale Creek and its tributaries. Valley Needlegrass Grassland is only found in relatively undisturbed areas in a few parts of the biological study area. A description of each plant community type is presented below (see also Figure 3-33).

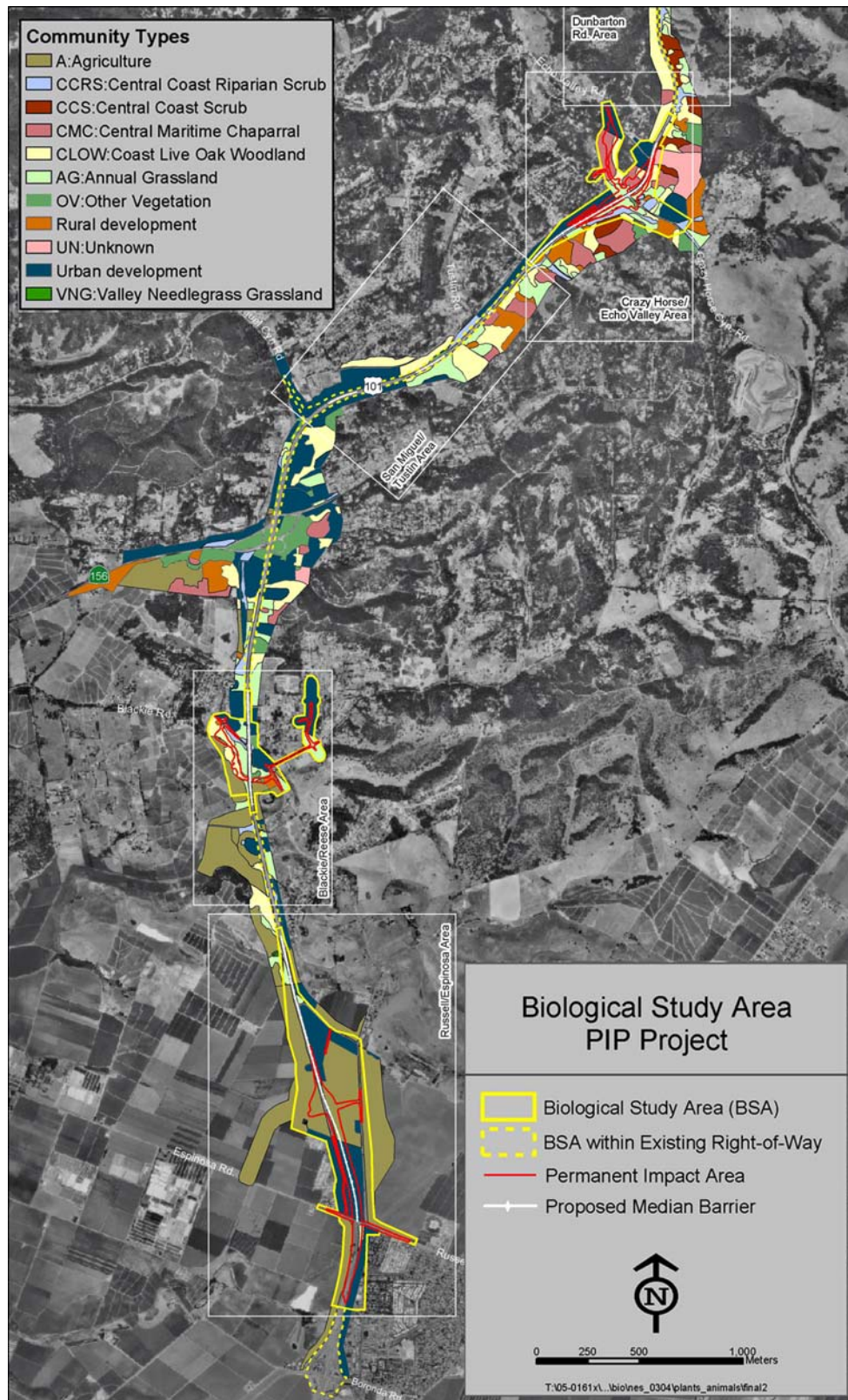


Figure 3-33 Biological Study Area

Annual Grassland

Annual Grassland covers large portions of the project area, and coupled with Coast Live Oak Woodland, occupies the largest acreage within the biological study area. Although this community type is often referred to as grassland, it also contains significant stands of introduced and native forbs. The dominant grasses within the biological study area are hare barley (*Hordeum murinum* ssp. *leporinum*), wild oat (*Avena* spp.), rip-gut brome (*Bromus diandrus*), and soft shess (*Bromus hordeaceus*). Dominant forbs in the annual grassland include filaree (*Erodium* spp.), deerweed (*Lotus scoparius*), cut-leaf geranium (*Geranium dissectum*), yarrow (*Achillea millefolium*), Italian thistle (*Carduus pycnocephalus*), rose clover (*Trifolium hirtum*), manzanita species, and other woody perennial shrubs.

Coast Live Oak Woodland

Coast Live Oak Woodland is characterized by one dominant tree, coast live oak (*Quercus agrifolia*), which grows in varying densities, from pure, closed-canopy stands to open savannas. The coast live oak is evergreen and reaches 25 meters (82 feet). Poison oak (*Toxicodendron diversilobum*), California blackberry (*Rubus ursinus*), and ferns in moist areas often dominate the shrub layer. In dryer areas, the herb layer contains non-native annual grasses such as ripgut brome (*Bromus diandrus*) and barley (*Hordeum murinum* ssp. *leporinum*). Other characteristic species include coffeeberry (*Rhamnus californica*), sticky monkeyflower (*Mimulus aurantiacus*), toyon (*Heteromeles arbutifolia*), and California sagebrush (*Artemisia californica*). Coast Live Oak Woodland is common throughout the project biological study area. It occurs in developed and undeveloped locations and intergrades with Central Maritime Chaparral and Annual Grassland. Some of the largest stands are located in the Crazy Horse Canyon Road/Echo Valley Road Area of the biological study area and on the hill at the western edge of the Blackie Road/Reese Circle Area.

Central Maritime Chaparral

This community type is tracked by the California Natural Diversity Database. It is a variable scrub community with moderate to high cover dominated by specialized manzanita species. This community is found on sandy, well-drained soils within zones of coastal summer fog. Fire is needed for maintenance of the habitat; in the absence of fire, the community tends toward coast live oak woodland. Typical species are manzanitas (*Arctostaphylos* spp.), chamise (*Adenostoma fasciculata*), California sagebrush, coyote bush (*Baccharis pilularis*), Monterey ceanothus (*Ceanothus cuneatus* var. *rigidus*), mock heather (*Ericameria ericoides*), toyon, sticky

monkeyflower, coast live oak, coffeeberry, black sage (*Salvia mellifera*), and poison oak. The community often intergrades with Central Coastal Scrub. In the biological study area, it was found only within the Crazy Horse Canyon Road/Echo Valley Road Area.

Central Coast Scrub

Central Coastal Scrub is composed of shrubs, 1 to 2 meters (3.3 to 6.7 feet) tall and usually quite dense. Dominant species are evergreen shrubs that exhibit more growth in late winter and spring. Flowering is concentrated in spring and early summer, but continues throughout the year. This community is adapted to fire by crown sprouting. The community type is often co-dominated by black sage, California sagebrush, sticky monkeyflower, and poison oak. Other characteristic species are coyote bush, mock heather, golden yarrow (*Eriophyllum confertiflorum*), and coffeeberry. Some areas contain this community type interspersed with coast live oak. Central Coastal Scrub occurred frequently adjacent to and intergraded with Central Maritime Chaparral and Coast Live Oak Woodland. Within the biological study area, it was found only within the Crazy Horse Canyon Road/Echo Valley Road Area.

Central Coast Riparian Scrub

Central Coast Riparian Scrub forms a shrubby streamside thicket varying from open to impenetrable, dominated by any of several willow species. The dominant species in the Prunedale area are mostly arroyo willow (*Salix lasiolepis*) and yellow willow (*Salix lasiandra*). This early successional community grows along most perennial streams and numerous intermittent drainages. Specific locations within the biological study area include Prunedale Creek in the Crazy Horse Canyon Road/Echo Valley Road Area and further downstream near the intersection of Blackie Road and Route 101. Much more of Prunedale Creek would support this community if the creek were not periodically cleared of vegetation. As it grows to maturity, the community also supports black cottonwood (*Populus balsamifera* ssp. *trichocarpa*) in the wetter areas and coast live oak in the drier areas. Good examples of the mature community are found on the Caltrans property south of the Route 101/Crazy Horse intersection. Under dense willows, an understory does not often develop, but in more open areas, watercress (*Rorippa nasturtium-aquaticum*), nutsedge (*Cyperus eragrostis*), cattails (*Typha* spp.), sedges (*Carex* spp.), and rushes (*Juncus* spp.) grow in slow-moving stream channels and wet swales.

Valley Needlegrass Grassland

Purple needlegrass (*Nassella pulchra*) and a variety of other native and non-native plants dominate Valley Needlegrass Grassland. Areas with stands of native grasses occur in two small locations within the biological study area. The first stand is found at the edge of a cultivated field west of the Route 101/Ralph Lane intersection at the north end of the Russell Road/Espinosa Road area of the biological study area. The second stand is near another cultivated field atop the hill at the western edge of the Blackie Road/Reese Circle Area. Flatter, more heavily grazed or disturbed locations support non-native annual grasses.

3.13.3 Impacts

All biological cumulative impacts are discussed in Section 3.19. Of the natural communities discussed in the preceding section, avoidance or minimization measures are proposed for three considered to be sensitive: Coast Live Oak Woodland, Central Maritime Chaparral, and Valley Needlegrass Grassland. Permanent impacts to these natural communities would occur within the areas of cut and fill. Potential temporary impacts would result in areas where construction activities occur between areas of cut and fill and a 10-meter (33-foot) buffer outside the new proposed Caltrans right-of-way.

The potential permanent impacts to Central Maritime Chaparral would be 2.97 hectares (7.33 acres). Temporary impacts would be 2.39 hectares (5.91 acres).

There would be no impacts to Valley Needlegrass Grassland as long as avoidance and minimization measures are implemented.

The permanent impacts to Coast Live Oak Woodland would be 3.85 hectares (9.50 acres). The temporary impacts would be 3.74 hectares (9.24 acres).

There would be no impacts to Natural Plant Communities with the No-Build Alternative.

3.13.4 Avoidance, Minimization, and/or Mitigation Measures

To minimize permanent and temporary impacts (see Section 3.13.3 for information on impacts) to Coast Live Oak Woodland, Central Maritime Chaparral, and Valley Needlegrass Grassland, where feasible, the following measures would be incorporated into the project:

- Avoidance and minimization, including construction of retaining walls to reduce the project footprint, pre-construction surveys to establish environmentally sensitive areas, onsite biological monitoring to maintain environmentally sensitive areas throughout construction, and erosion control with storm water Best Management Practices.
- Loss of non-native vegetation—trees, shrubs, and grasses would be considered under avoidance and minimization measures. Non-native vegetation would be replaced at a 1:1 ratio using native plants where feasible. Revegetation would occur within the project limits and inside the Caltrans highway right-of-way.
- To minimize impacts where special-status plants cannot be avoided, individual plants that can be salvaged would be moved and replanted at designated sites within the project limits. If plant salvage is not feasible, plants that are removed in temporarily disturbed areas would be cut off at ground level to reduce disturbance to the soil rather than clearing and grubbing with heavy equipment. Seeds and topsoil free of noxious weeds would be collected and stored to use for re-seeding the temporarily disturbed areas.
- The Coast Live Oak is one of the species susceptible to infection by Sudden Oak Death. Monterey County is currently under State and Federal quarantine for this disease. Specific regulations regarding the movement and use of susceptible plants as well as State and Federal guidelines for sanitation practices for working in infested areas will be followed.
- To reduce disturbance in areas that have potential habitat for California red-legged frog, California tiger salamander, and southwestern pond turtle, vegetation would be removed by hand. Also, any water used to control dust and protect air quality during construction would not be taken from local streams and ponds that support these species.
- In addition to the avoidance and minimization measures listed above, the terms and conditions identified in the Biological Opinion issued for this project under Section 7 Consultation with the U.S. Fish and Wildlife Service (USFWS) would be implemented to further avoid and reduce impacts to federally listed species.
- Temporary construction impacts to sensitive plant communities, which include upland habitats for wildlife and special-status plants, would be mitigated onsite by restoring areas within the Caltrans right-of-way. Restoration would be planned to improve habitat as well as replace vegetation lost during construction. If onsite mitigation is not practical because of constraints such as water supply, soil types,

or size of the area required to adequately mitigate losses, the mitigation would occur on the same types of habitat chosen to mitigate for the permanent impacts.

3.14 Wetlands and Other Waters of the United States

3.14.1 Regulatory Setting

Wetlands and other waters of the United States are protected under a number of laws and regulations. At the federal level, the Clean Water Act (33 U.S.C. 1344) is the primary law regulating wetlands and waters. The Clean Water Act regulates the discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils subject to saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the Clean Water Act.

Section 404 of the Clean Water Act establishes a regulatory program that provides that no discharge of dredged or fill material can be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers with oversight by the Environmental Protection Agency.

The Executive Order for the Protection of Wetlands (Executive Order 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this executive order states that a federal agency, such as the Federal Highway Administration, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: 1) that there is no practicable alternative to the construction and 2) the proposed project includes all practicable measures to minimize harm.

At the state level, wetlands and other waters are regulated primarily by the California Department of Fish and Game and the Regional Water Quality Control Boards. In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission) may also be involved. Sections 1600-1607 of the Fish and

Game Code require any agency that proposes a project that would substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify the California Department of Fish and Game before beginning construction. If the Department of Fish and Game determines that the project may substantially and adversely affect fish or wildlife resources, a 1602 Lake or Streambed Alteration Agreement would be required. California Department of Fish and Game jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the Army Corps of Engineers may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the California Department of Fish and Game.

The Regional Water Quality Control Boards were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The Regional Water Quality Control Board also issues water quality certifications in compliance with Section 401 of the Clean Water Act. Please see the Water Quality section for additional details.

3.14.2 Affected Environment

Caltrans conducted wetland delineations in 2001 and 2002 to determine the potential effects of the project on wetlands and other waters of the United States. Alternatives were evaluated (see Section 2.2, Project Alternatives), and each proposed improvement within the project limits was designed to avoid and minimize effects on wetlands.

Seasonal wetlands along Prunedale Creek were present within the Biological Study Area from the Blackie Road/Reese Circle Area to the Crazy Horse Canyon Road/Echo Valley Road Area. Seeps, areas where groundwater occurs at the soil surface, were observed in the Crazy Horse Canyon/Echo Valley Road area (Figure 3-34).

“Other waters” refers to waters of the United States other than navigable waters or jurisdictional wetlands. These include streams, such as Prunedale Creek, which runs in a north/south direction through portions of the project area (Figure 3-34). Other waters of the U.S. occur in every portion of the project area. There is an artificial pond used for agricultural irrigation in the Russell/Espinosa area. However, the pond is not considered a jurisdictional wetland because the water source is artificial and it was not constructed in a historic wetland channel.

3.14.3 Impacts

All biological cumulative impacts are discussed in Section 3.19. The project would temporarily and permanently affect wetlands and other waters of the U. S. (Table 3.10, Figure 3-34).

Table 3.10 Potential Impacts to Wetlands and Other Waters of the U.S.

Location	Wetlands		Other Waters of the U.S.	
	Permanent	Temporary	Permanent	Temporary
Russell Road and Espinosa Road Area	0.0 hectares 0.0 acres	0.0 hectares 0.0 acres	0.115 hectare 0.285 acre	0.014 hectare 0.035 acre
Blackie Road and Reese Circle Area	0.048 hectare 0.119 acre	0.024 hectare 0.059 acre	.056 hectare 0.139 acre	0.022 hectare 0.054 acre
Crazy Horse Canyon Road Area	0.380 hectare 0.939 acre	0.942 hectare 2.327 acres	0.024 hectare 0.060 acre	0.076 hectare 0.187 acre
Total Hectares/Acres	0.428 hectare 1.058 acres	0.966 hectare 2.386 acres	0.195 hectare 0.484 acre	0.112 hectare 0.276 acre

Caltrans coordinated with the Army Corps of Engineers, the Environmental Protection Agency, the United States Fish and Wildlife Service, and the Regional Water Quality Control Board (see Chapter 5, Summary of Public/Agency Involvement Process/Tribal Coordination). The following agreements/permits would be required: California Department of Fish and Game 1602 Agreement, Army Corps of Engineers 404 permit, and a Regional Water Quality Control Board 401 permit.

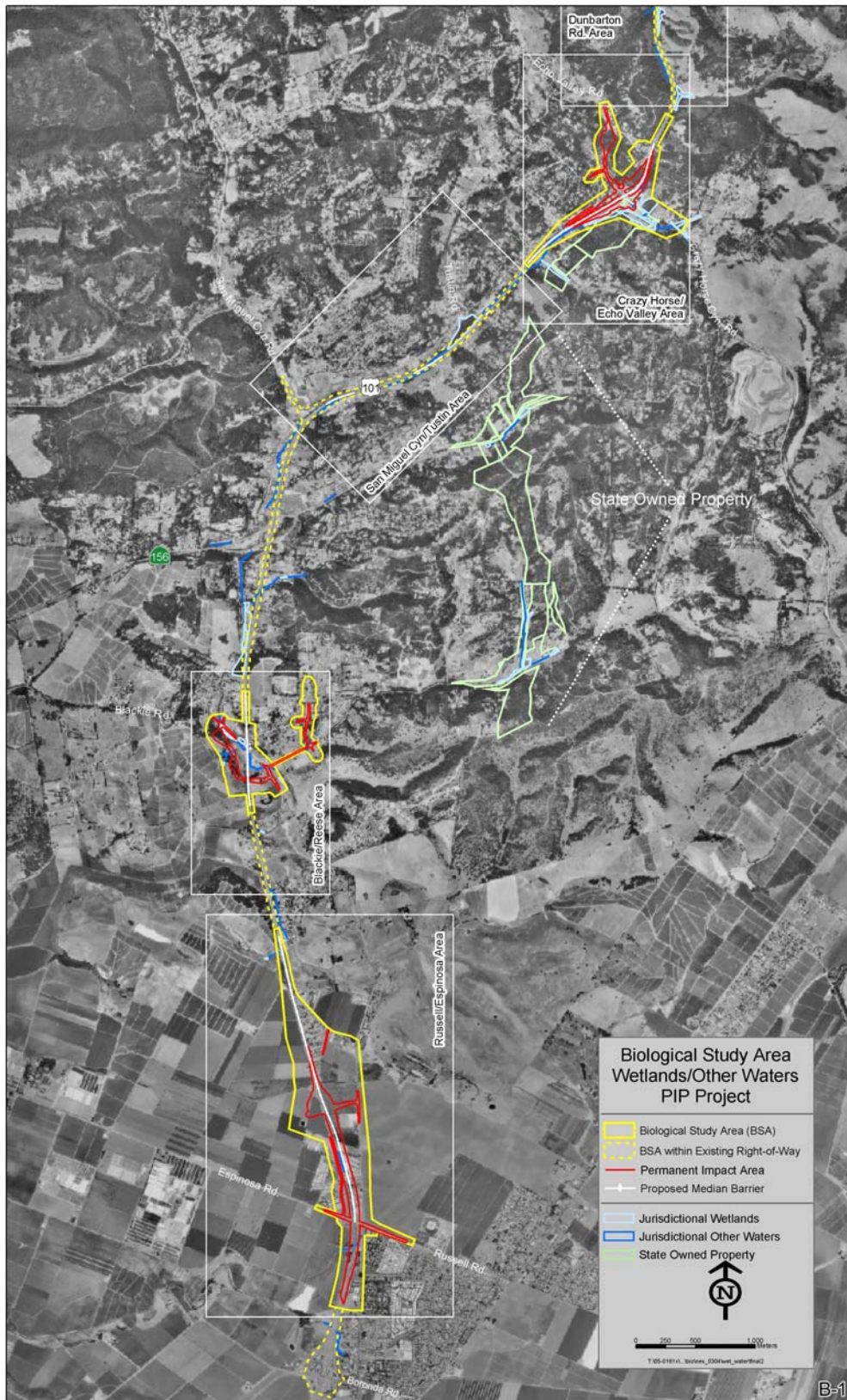


Figure 3-34 Impacts on Wetland and Waters of the United States

3.14.4 Avoidance, Minimization, and/or Mitigation Measures

Avoidance and minimization measures, including construction of retaining walls to reduce impacts to seasonal wetlands, establishment of environmentally sensitive areas, onsite biological monitoring to maintain environmentally sensitive areas throughout construction, and erosion control with appropriate best management practices for storm water, will be incorporated into the project. Some construction activities would be seasonally restricted in areas where sensitive resources are protected. Specifics of these actions are described under special provisions of the contract.

Seasonal wetlands that are temporarily disturbed during construction would be replaced onsite within the new Caltrans right-of-way by restoring the wetland areas to their original condition. In the case of areas that were highly degraded before construction, restoration plans would be designed by Caltrans with recommendations made by appropriate regulatory agencies.

As onsite mitigation is constrained by water supply, available acreage of appropriate soil, or habitat types, the mitigation is proposed to occur offsite in cooperation with the Elkhorn Slough Foundation. The number of hectares (acres) required for compensating for impacts would be based on resource agency recommendations, as well as the function and quality of aquatic habitat that needs to be replaced.

3.15 Plant Species

3.15.1 Regulatory Setting

The U.S. Fish and Wildlife Service and California Department of Fish and Game share regulatory responsibility for the protection of special-status plant species. “Special-status” species are selected for protection because they are rare and/or subject to population and habitat declines. “Special-status” is a general term for species that are afforded varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act and/or the California Endangered Species Act. Please see the Threatened and Endangered Species Section 3.17 in this document for detailed information regarding these species.

This section of the document discusses all the other special-status plant species, including California Department of Fish and Game fully protected species and species of special concern, United States Fish and Wildlife Service candidate species, and plant species listed by the California Native Plant Society.

The regulatory requirements for the Federal Endangered Species Act can be found at United States Code 16 (USC), Section 1531, et. seq. See also 50 CFR Part 402. The regulatory requirements for the California Endangered Species Act can be found at California Fish and Game Code, Section 2050, et. seq. Caltrans projects are also subject to the Native Plant Protection Act, found at Fish and Game Code, Section 1900-1913, and the California Environmental Quality Act, Public Resources Code, Sections 2100-21177.

3.15.2 Affected Environment

The project area supports three plant species that are considered sensitive by the California Native Plant Society: pajaro manzanita (*Arctostaphylos pajaroensis*), Monterey ceanothus (*Ceanothus cuneatus* var. *rigidus*), branching beach aster (*Corethrogyne leucophylla*), and the Monterey spineflower (*Chorizanthe pungens* var. *pungens*).

Pajaro manzanita is an evergreen shrub with dark red, exfoliating bark, white flowers and no basal burl. It grows up to 4 meters (13.1 feet) high, and blooms from December to March at elevations between 70-360 meters (230-1181 feet). It grows in chaparral habitats in sandy soils. There are extensive stands of pajaro manzanita within the project limits at the Crazy Horse Canyon Road/Echo Valley Road area and throughout the Prunedale area (Figures 3-37 and 3-38).

Monterey ceanothus is a prostrate to erect evergreen shrub with bright to pale pink flowers that blooms between February and April. It grows at elevations between 3 to 200 meters (9.84 to 656 feet) in the sandy soils of closed-cone coniferous forest, chaparral, and coastal scrub. This species was found in the Crazy Horse Canyon Road/Echo Valley Road Area in stands of pajaro manzanita in the Central Maritime Chaparral plant community.

Branching beach aster grows in closed-cone coniferous forest and coastal dune habitats. It was found at the Russell/Espinosa location in a small area of Valley Needlegrass Grassland. The surrounding areas are strawberry fields or are disked for agriculture. Branching beach aster was also found at the Blackie Road/Reese Circle

Overcrossing at the edge of a disked field just outside the drip line of Coast Live Oak Woodland. The area is highly disturbed and dominated by annual grasses like wild oat (*Avena* sp.) and soft chess (*Bromus hordeaceus*). At the Crazy Horse Canyon/Echo Valley Road area, branching beach aster was found east and west of Route 101 and north of the Crazy Horse Canyon/Route 101 intersection. In both cases, it is within areas of non-native annual grassland in highly disturbed, eroded sandy soils (see Figures 3-35, 3-36, and 3-38).

3.15.3 Impacts

All biological cumulative impacts are discussed in Section 3.19. Permanent impacts to special-status plant species would result from cut and fill activities during construction. Temporary impacts would result from other construction activities that occur between the cut and fill and within a 10-meter (33-foot) buffer of the new proposed right-of-way. Potential permanent and temporary impacts are described in Table 3.11.

Table 3.11 Potential Temporary and Permanent Impacts

Species	Permanent Impacts	Temporary Impacts
Pajaro manzanita	2.97 hectares (7.33 acres)	2.39 hectares (5.91 acres)
Monterey ceanothus	0.006 hectare (0.014 acre)	No Temporary Impacts
Branching beach aster	0.06 hectare (0.146 acre)	No Temporary Impacts

3.15.4 Avoidance, Minimization, and/or Mitigation Measures

Avoidance and minimization measures would be the same as the measures included for sensitive natural communities found in Section 3.13.4. Additional avoidance and minimization measures incorporated into the project would be:

- To ensure that impacts are avoided or minimized, a qualified Caltrans biologist or designee would conduct pre-construction surveys. Individual plants that occur within the work zone that do not need to be removed for construction, would be designated as an Environmentally Sensitive Area.
- Where feasible, individual plants that can be salvaged and relocated would be relocated to designated sites within the project limits.

- If salvage is not feasible, plants to be disturbed temporarily would be cut off at ground level to reduce disturbance to the soil rather than clearing and grubbing with heavy equipment.
- Topsoil that is free of noxious weeds would be collected and stored to provide the seed bank for reestablishing the plant species.
- If necessary, seeds could be collected from branching beach aster, Monterey ceanothus, and Pajaro manzanita and used for re-seeding the temporarily disturbed areas and seeding within the proposed mitigation site.

3.16 Animal Species

3.16.1 Regulatory Setting

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service, the National Oceanographic and Atmospheric Fisheries, and the California Department of Fish and Game are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with special-status wildlife not listed or proposed for listing under the state or federal Endangered Species Acts. Species listed or proposed for listing as threatened or endangered are discussed in Section 3.17. All other special-status animal species are discussed here, including California Department of Fish and Game fully-protected species and species of special concern, and United States Fish and Wildlife Service or National Oceanographic and Atmospheric Fisheries species of concern and candidate species.

Federal laws and regulations, other than the Federal Endangered Species Act, pertaining to special-status wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations, other than the California Endangered Species Act, pertaining to wildlife include the following:

- California Environmental Quality Act
- Sections 1601 – 1603 of the Fish and Game Code
- Section 4150 and 4152 of the Fish and Game Code

3.16.2 Affected Environment

Caltrans prepared a Natural Environment Study for the project (July 2004). The report indicated the project study area supports four sensitive species: southwestern pond turtle (*Emys [formerly Clemmys] marmorata pallida*), Monterey dusky-footed woodrat (*Neotoma fuscipes luciana*), Cooper's hawk (*Accipiter cooperi*), and yellow warbler (*Dendroica petechia brewsteri*). (See Figure 3-38 at the end of this chapter).

Southwestern Pond Turtle

The southwestern pond turtle is a subspecies of the western pond turtle, the only native turtle in California, and is listed as a California species of special concern. Although pond turtles are aquatic and occur in streams and ponds with adequate areas for basking in the sun, the females lay eggs in nests they dig in upland habitat. The nests can be up to 500 meters (1,640 feet) from aquatic areas; therefore, it is important to protect upland habitat, as well as aquatic habitat.

Southwestern pond turtles were not observed in the proposed project study area. However, a single southwestern pond turtle was observed outside the biological study area basking on the stream bank of Prunedale Creek west of Route 101 between San Miguel Canyon Road and the Route 101/Route 156 interchange at Vierra Canyon Road. This is the same stream that flows through the project area at Blackie Road/Reese Circle where there is habitat for pond turtles. Therefore, there is potential for southwestern pond turtles to inhabit this portion of the project area.

Monterey Dusky-footed Woodrat

The Monterey dusky-footed woodrat is a California species of special concern. The dusky-footed woodrat is typically found in areas with dense vegetation that offer cover and material for constructing houses made of sticks. In the study area, Monterey dusky-footed woodrat was found everywhere there were oak woodlands or thick riparian forest and appeared to be most abundant in thicker vegetation, such as the boundary between oak woodland and mixed chaparral. They did not occur where there was little woody debris on the ground.

Cooper's Hawk

The Cooper's hawk is a California species of special concern. This hawk, which inhabits oak woodlands and riparian forests, commonly returns to the same area for nesting each year, and it is the nest site that is considered sensitive. Cooper's hawks were observed within the Biological Study Area at Crazy Horse Canyon Road and Route 101; no nests were observed (see Figure 3-38 at the end of this chapter).

Yellow Warbler

The yellow warbler is a California Species of Special Concern. This bird, which inhabits riparian areas where it nests in willow thickets and in broad-leaved trees, also frequently returns to the same nesting area each year, and it is the nest site that is considered sensitive. Yellow warblers were observed in the biological study area at Crazy Horse Canyon Road, however, no nests were observed in the study area (see Figure 3-38 at the end of this chapter).

3.16.3 Impacts

All biological cumulative impacts are discussed in Section 3.19.

Southwestern Pond Turtle

The waterways within the Biological Study Area (BSA) are generally narrow and channeled. No ponds with basking areas were identified within the Biological Study Area. Although a western pond turtle was observed basking west of the Biological Study Area along Prunedale Creek, it is anticipated that the creek portions to be affected by construction would be used only as a corridor rather than as breeding, basking, and foraging habitat. Potential permanent impacts to the creek (0.05 acre) and potential temporary impacts (0.03 acre) during construction are not anticipated to reduce the value of the creek as a functioning corridor. The combination of standard avoidance measures, such as preconstruction surveys, and defined Environmentally Sensitive Areas, where necessary, would also make mortality to an individual western pond turtle unlikely.

Monterey Dusky-footed Woodrat

It is estimated that impacts to coast live oak woodland, with which the Monterey dusky-footed woodrat is associated, would amount to 9.24 acres (temporary) and 9.50 acres (permanent). Pre-construction surveys would be conducted, and, if necessary, Environmentally Sensitive Areas and onsite monitoring would be implemented to avoid impacts to this species. This species is regionally abundant and there is suitable alternate habitat for the Monterey dusky-footed woodrat throughout the Prunedale area.

Cooper's Hawk

Permanent impacts to known nesting sites for Cooper's hawks are not anticipated to occur during construction. If this species nests in the vicinity of Crazy Horse Canyon Road/Route 101 area, impacts would be a temporary displacement of individual birds foraging in the area during construction.

Yellow Warbler

Permanent impacts to known nest sites for yellow warblers are not anticipated to occur from the proposed project. If this species nests in the vicinity of Crazy Horse Canyon Road, temporary impacts would be restricted to temporary displacement of individual birds foraging in the area during construction.

3.16.5 Avoidance, Minimization, and/or Mitigation Measures

Southwestern Pond Turtle and Monterey Dusky-footed Woodrat

To minimize or avoid impacts to these special-status species that may be located within and adjacent to the area of potential impact, the following measures would be incorporated into the project:

- If southwestern pond turtle or Monterey dusky-footed woodrat are found within the area of potential impact or staging areas during pre-construction surveys, or during grubbing and grading activities, areas where animals have been identified would be designated as Environmentally Sensitive Areas.
- If protecting animals by designating the area as an Environmentally Sensitive Area is not possible, a Memorandum of Understanding with the California Department of Fish and Game would be necessary for authorization to capture and release animals to a pre-designated location outside of the work area that has the appropriate habitat.
- If the California Department of Fish and Game approves moving animals, the approved biologist would be allowed sufficient time to move these animals from the work site before work activities begin or resume.

Mitigation measures are not included for loss of habitat specifically for pond turtles and woodrats. However, habitat that is lost during construction would be replaced when the mitigation measures included for wetlands and other waters of the U.S., Coast Live Oak Woodland, and Central Maritime Chaparral are implemented (Section 3.14.4 and 3.15.4).

Cooper's Hawk and Yellow Warbler

To minimize or avoid impacts to these special-status bird species, the following measures would be incorporated into the project:

- To avoid impacts to nesting birds, any trees that need to be removed for this project would be removed before the nesting season between September 1 and

February 1. The biologist or designee must be contacted at least one month before trees are removed to allow a qualified biologist time to inspect trees for active bird nests.

- In addition, pre-construction surveys would be completed and Environmentally Sensitive Areas would be established if special-status birds are found nesting in the vicinity of the work area.

3.17 Threatened and Endangered Species

3.17.1 Regulatory Setting

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act: United States Code, Section 1531, et seq. See also 50 CFR Part 402. This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems on which they depend.

Under Section 7 of this act, federal agencies, such as the Federal Highway Administration, are required to consult with the U.S. Fish and Wildlife Service and the National Oceanographic and Atmospheric Fisheries to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 is a Biological Opinion or an incidental take statement. Section 3 of the Federal Endangered Species Act defines take as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or any attempt at such conduct.”

California has enacted a similar law at the state level, the California Endangered Species Act, California Fish and Game Code, Section 2050, et seq. The California Endangered Species Act emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project caused losses of listed species populations and their essential habitats.

The California Department of Fish and Game is the agency responsible for implementing the California Endangered Species Act. Section 2081 of the Fish and Game Code prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or

kill." The California Endangered Species Act allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by California Department of Fish and Game. For projects requiring a Biological Opinion under Section 7 of the Federal Endangered Species Act, the California Department of Fish and Game may also authorize impacts to California Endangered Species Act species by issuing a Consistency Determination under Section 2080.1 of the Fish and Game Code.

3.17.2 Affected Environment

Monterey Spineflower

The Monterey spineflower (*Chorizanthe pungens* var. *pungens*) was federally listed as threatened on February 4, 1994, and designated critical habitat was published for this species on May 29, 2002 (see Figure 3-38 at the end of this chapter).

Monterey spineflower is an annual herb, blooming from April to June with white to rose flowers at elevations between 3 to 450 meters (9.84 to 1476 feet). It grows in maritime chaparral, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grasslands. Monterey spineflower was once fairly common in the Prunedale hills, but recent urbanization, recreational activities, agriculture, military activities, and non-native plants have reduced its range. During botanical surveys, Monterey spineflower was often observed in bare zones at the edges of Central Maritime Chaparral and Central Coastal Scrub where black sage was dominant.

California Red-legged Frog

The California red-legged frog was federally listed as threatened on May 23, 1996, and a final recovery plan was approved September 12, 2002. Designated critical habitat, which was listed March 13, 2001, was vacated on November 6, 2002. However, critical habitat was re-proposed for listing on April 13, 2004. This project falls within the boundary of Unit 17, Elkhorn Slough/Salinas River Unit for proposed critical habitat.

This species is the largest native frog in the western United States, ranging from 38.1 to 129.5 millimeters (1.5 to 5.1 inches) in length. Tadpoles range from 15.2 to 78.7 millimeters (0.6 to 3.1 inches) in length, and are dark brown and yellow with dark spots.

Frogs spend most of their lives in and near sheltered backwaters of ponds, marshes, springs, streams, and reservoirs. Optimal habitat consists of deep pools with dense stands of overhanging willows and an intermixed fringe of cattails. Eggs, larvae, transformed juveniles, and adults have also been found in ephemeral streams and in ponds that do not have riparian vegetation. Individuals are known to move long distances over land between water sources during winter rains.

Within the proposed project area, California red-legged frogs were observed in Prunedale Creek just west of Route 101 along Blackie Road, and in an intermittent stream north of Crazy Horse Canyon Road and east of Route 101. (See Figures 3-36 and 3-39 at the end of this chapter).

California Tiger Salamander

The California tiger salamander, Central population, was federally listed as Threatened by the U. S. Fish and Wildlife Service on August 4, 2004 (USFWS 2004). Although critical habitat has been proposed for this species, the project does not fall within a proposed designated unit.

The California tiger salamander is native to California and occurs west of the Sierra Nevada in the Sierra foothills, the Central Valley, the coast ranges, and intermountain valleys from near Petaluma and Sacramento in the north to Tulare and Santa Barbara counties in the south. Restricted to grasslands and oak savannah plant communities from sea level to foothill regions (generally under 500 meters [1,640 feet]), the salamanders breed in vernal pools as well as man-made permanent and seasonal ponds. Adult salamanders spend only a few days or weeks in breeding pools during the wet season (usually November to March). During the dry season, adults as well as subadults and dispersing juveniles remain inactive in small rodent burrows, especially those of the California ground squirrel (*Spermophilus beecheyi*). Although maintaining ground squirrel populations appears to be essential to maintaining upland habitat (Loredo 1996, Trenham 2000), California tiger salamander will also use other small mammal burrows such as Botta's pocket gopher (*Thomomys bottae*).

Although California tiger salamanders were not observed in the project limits and there is no suitable aquatic habitat within the work area, immature California tiger salamanders were observed in a vernal pool located one mile away to the southeast of the intersection of Crazy Horse Canyon Road and Route 101.

Although the distance of the biological study area from the known California tiger salamander breeding pool is near the outer limits of known migration distances (observed in grassland areas), it is not expected that the project would affect the California tiger salamander according to the following line of reason:

- Numerous ground squirrel burrows and open grasslands are available within the immediate vicinity of the breeding pools. Salamanders would thus be able to obtain forage and cover within a short migration distance;
- Potential migration toward the biological study area would involve movement along/across a two-lane road with heavy truck traffic;
- Potential migration toward the biological study area would occur across urban and rural residential housing with associated risks posed by human and pet animal activities;
- Potential migration toward the biological study area would occur across areas of varying topography, the non-developed areas of which include dense stands of oak woodland, poison oak, riparian scrub, and/or blackberry.

3.17.3 Impacts

All biological cumulative impacts are discussed in Section 3.19.

Monterey Spineflower

The temporary impacts to occupied habitat would be 0.013 hectare (0.031 acre). The temporary impacts to unoccupied but suitable habitat would be 0.148 hectare (0.366 acre).

Occupied habitat that would be permanently impacted is 0.002 hectare (0.006 acre). Unoccupied but suitable habitat that would be permanently impacted within the cut/fill line is 0.094 hectare (0.232 acre).

Designated Critical Habitat

Portions of this project fall within designated critical habitat (Unit G: Prunedale Unit) for Monterey spineflower. However, the locations within the biological study area where suitable soil types occur for this species and where plants were observed on the west side of Route 101 in the Crazy Horse Canyon Road/Echo Valley Road Area, are outside the boundary for this unit. Therefore, the project would not adversely modify designated critical habitat for Monterey spineflower. See Table 3.12 (Anticipated Effects to Listed Species) on the following page.

California Red-legged Frog

Suitable habitat (both occupied and unoccupied) for the California red-legged frog exists within the biological study area.

In occupied habitat, permanent impacts would include the loss of aquatic and riparian habitat in Prunedale Creek at the Blackie Road/Reese Circle area. The permanent impacts would occur when a new culvert is installed in the creek to accommodate the overcrossing proposed at Prunedale South Road/Blackie Road. Also, mortality of individual frogs could potentially occur during construction activities at this location. Temporary impacts would include displacement of individual frogs during construction and loss of the use of aquatic and riparian habitat in areas immediately adjacent to the work area.

The total hectares (acres) of occupied habitat that would be permanently removed between the cut and fill line and inside the new proposed right-of-way would be 0.084 hectare (0.208 acre). The total temporary impacts to occupied habitat in this area would be 0.054 hectare (0.132 acre).

Suitable but unoccupied habitat within the biological study area includes those areas within close proximity to occupied habitat that has the potential to support the California red-legged frog.

The total hectares (acres) of unoccupied habitat that would be permanently removed between the cut and fill line and inside the new proposed right-of-way would be 0.452 hectare (1.116 acres). The total temporary impacts to unoccupied habitat in this area would be 1.567 hectares (3.870 acres). Designated critical habitat for the California red-legged frog would not be affected. See Table 3.12 (Anticipated Effects to Listed Species).

California Tiger Salamander

No impacts to this species are expected as long as the avoidance and minimization measures are followed. See Table 3.12 (Anticipated Effects to Listed Species)

Agency Coordination

The California Department of Fish and Game, Army Corps of Engineers, and the United States Fish and Wildlife Service have been consulted regarding this project. Table 3.12 shows the anticipated effects determination regarding listed species within the project limits.

Table 3.12 Anticipated Effects to Listed Species

Summary of Anticipated Affects to Federally Listed Species	
Federal and State Status	Level of Affect
California red-legged frog (FT)	May Affect, Likely to Adversely Affect
Designated Critical Habitat for the California red-legged frog	May Affect, Not Likely to Adversely Modify
California tiger salamander (FT)	Not Likely to Affect
Monterey spineflower	May Affect, Likely to Adversely Affect
Designated Critical Habitat for the Monterey spineflower	No effect

FT = Federally listed as threatened

On April 28, 29, 30, May 1, and May 13, 2003, a Caltrans Biologist and a representative from the San Francisco Army Corps of Engineers office conducted a field verification of the draft wetland delineation for the Prunedale Freeway Project. The final wetland delineation report was submitted to the Army Corps of Engineers on June 15, 2004. Many of the wetlands that were verified along the existing Route 101 in 2003 would also be affected by the project.

3.17.4 Avoidance, Minimization, and/or Mitigation Measures

When a proposed project may affect a listed species or designated critical habitat, avoidance, minimization, and/or mitigation measures must be taken. These measures must be coordinated with the United States Fish and Wildlife Service, and this process is called Section 7 Consultation. Section 7 Consultation involves the preparation and submittal of a Biological Assessment to the U.S. Fish and Wildlife Service, which identifies the project and the potential effects on sensitive species and habitats. The Service issued a Biological Opinion (Appendix F), which identifies the “effect determination” and necessary mitigation measures. Similar coordination occurs with the California Department of Fish and Game, resulting in a California Department of Fish and Game Section 2081 Incidental Take Statement.

Monterey Spineflower

The following avoidance measures would be incorporated into the project:

- Construction of retaining walls to reduce the project footprint where feasible
- Pre-construction surveys to establish environmentally sensitive areas
- Onsite biological monitoring to maintain established environmentally sensitive areas throughout construction

In addition to the avoidance and minimization measures listed above, the terms and conditions identified in the Biological Opinion issued by the United States Fish and Wildlife Service under Section 7 Consultation for this project would be implemented.

California Red-legged Frog

Avoidance and minimization measures incorporated into the project include pre-construction surveys, establishment of environmentally sensitive areas, and onsite biological monitoring during construction activities where there is habitat for California red-legged frog. In addition to the avoidance and minimization measures listed above, the terms and conditions identified in the Biological Opinion that was issued by the U. S. Fish and Wildlife Service under Section 7 Consultation for this project would be implemented to further avoid and reduce impacts to this species. (See Section 3.13.4).

California Tiger Salamander

No impacts to the California tiger salamander are expected to occur as a result of project construction. Therefore, no avoidance or minimization measures are proposed.

3.18 Invasive Species

3.18.1 Regulatory Setting

On February 3, 1999, President Clinton signed Executive Order 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem, whose introduction does or is likely to cause economic or environmental harm or harm to human health.” Federal Highway Administration guidance issued August 10, 1999 directs the use of the state’s noxious weed list to define the invasive plants that must be considered as part of the National Environmental Policy Act analysis for a proposed project.

3.18.2 Affected Environment

Invasive Plants

Invasive plant species were present throughout the biological study area, especially in areas of urban development. One species of particular concern was Cape ivy (*Delairea odorata* syn *Senecio mikanioides*), an invader of the Central Coast Riparian Scrub and Coast Live Oak Woodland community types. Cape ivy is not currently

present within the biological study area boundary, but it did infest Prunedale Creek north of the Blackie Road/Reese Circle Area and will likely disperse downstream either by seed or fragments. Three more invasive plants, jubata grass (*Cortaderia jubata*), ice plant (*Carpobrotus edulis*), and French broom (*Genista monspessulana*) were present on the hills in the northern part of the Crazy Horse Canyon Road/Echo Valley Road Area. These species could easily disperse into interchange construction areas as they colonize disturbed soils.

The California Invasive Plant Council maintains a list of exotic pest plants of greatest ecological concern in California (Cal-IPC 1999). Cape ivy, jubata grass, ice plant and French broom are all on the A-1 list: Most Invasive Wildland Pest Plants; Widespread.

Exotic Wildlife Species

An exotic species is defined as a species that is not native to the area and normally refers to a species that is either not native to the state, but occurs in other portions of the United States, or a species that is introduced from a foreign country. There are several exotic wildlife species that occur throughout the Prunedale area and within the boundaries of the biological study area at Blackie Road/Reese Circle Area.

Exotic aquatic species within the biological study area include bullfrogs (*Rana catesbeiana*), unidentified crayfish, and mosquito fish (*Gambusia affinis*). The bullfrog, native to central and eastern U.S., and the crayfish, were introduced as aquaculture species for human consumption. They eventually escaped or were released into the wild, invading streams throughout California. The mosquito fish, native to the eastern U.S., was introduced to the western U.S. to control mosquito larvae in streams, ponds, and ditches. Many counties in California, including Monterey County, periodically stock local streams and ponds with mosquito fish to control mosquito infestations. This species has also invaded streams and ponds throughout the U.S.

Terrestrial exotic species within the biological study area include the eastern red fox (*Vulpes fulva*), opossum (*Didelphis marsupialis*), and European starling (*Sturnus vulgaris*). The eastern red fox was introduced from the eastern U.S. to fur farms in California in the early 1900s. These animals either escaped from fur farms or were released (Jameson and Peeters, 1988) and are now widespread in California. The opossum was introduced from the eastern U.S. to San Jose, California in the early 1900s and is now widespread throughout most of California and the U.S. (Jameson

and Peeters, 1988). The European starling was introduced in New York in 1890 and arrived in California in the 1940s and competes with native birds for nesting sites.

3.18.3 Avoidance, Minimization, and/or Mitigation Measures

In compliance with the Executive Order on Invasive Species, Executive Order 13112, and subsequent guidance from the Federal Highway Administration, the landscaping and erosion control included in the project would not use species on the California list of noxious weeds. Exotic and invasive weeds would be removed during clearing and grubbing. In areas where exotic and invasive weeds are the dominant plants, the topsoil from those areas would not be re-used onsite in areas with sensitive plant communities or special-status plants. The project Biologist and the Resident Engineer would identify those areas in the field before construction. In areas that are to be re-vegetated and are identified for preservation, methods for removal and disposal of noxious weeds would be included in the restoration plan.

3.19 Biological Cumulative Impacts

The National Environmental Policy Act and the California Environmental Quality Act require that the direct, indirect, and cumulative impacts of proposed actions be assessed and disclosed. A cumulative impact analysis is required if a project's impact on a resource combined with impacts from other projects on that resource may be determined to be substantial. If project impacts to a resource are fully mitigated, then the project does not contribute to a cumulative impact on that resource.

The Prunedale Improvement Project would result in impacts to the California red-legged frog (*Rana aurora draytonii*), Monterey spineflower (*Chorizanthe pungens* var. *pungens*), pajaro manzanita (*Arctostaphylos pajaricensis*), Monterey ceanothus (*Ceanothus cuneatus* var. *rigidus*), branching beach aster (*Corethrogyne leucophylla*), coast live oak woodland, central maritime chaparral, wetlands, and other waters of the United States.

These impacts are localized along State Route 101 and occurring within a landscape fragmented by commercial and rural development. Impacts are to be fully mitigated offsite in the form of habitat preservation and creation of areas greater in size and better in quality than those removed by the project.

Several reasonably foreseeable projects occur within a two-mile radius of the Prunedale Improvement Project, each of which would be subject to independent environmental review and mitigation in accordance with state and federal law. These projects are located spatially distant from one another and in varied habitats.

Two transportation projects (Route 156 Widening and Route 101 San Juan Interchange) have some potential for impacts to the habitats or species affected by the Prunedale Improvement Project. It is anticipated that each of those projects will require that an Environmental Impact Report be prepared. All impacts resulting from these proposed projects, and proposed mitigation, will be disclosed in the environmental process.

Other future development projects with potential impacts similar to those of the Prunedale Improvement Project include a warehouse building, drainage improvements, and three subdivisions. The warehouse would be built in an existing commercial area, and the drainage project includes wetland avoidance and minimization measures. Two of the proposed subdivisions would require removing oak trees, which would be disclosed in an Environmental Impact Report and mitigated. The third proposed subdivision is occurring in a disturbed agricultural area and would have no impacts to the same resources as those affected by the Prunedale Improvement Project.

These projects are located spatially distant from each other, the habitats in which they occur vary, and each project is to be independently mitigated in accordance with State and Federal law. Therefore, the Prunedale Improvement Project is not expected to result in substantial cumulative effects to natural resources.

Temporal Cumulative Impacts

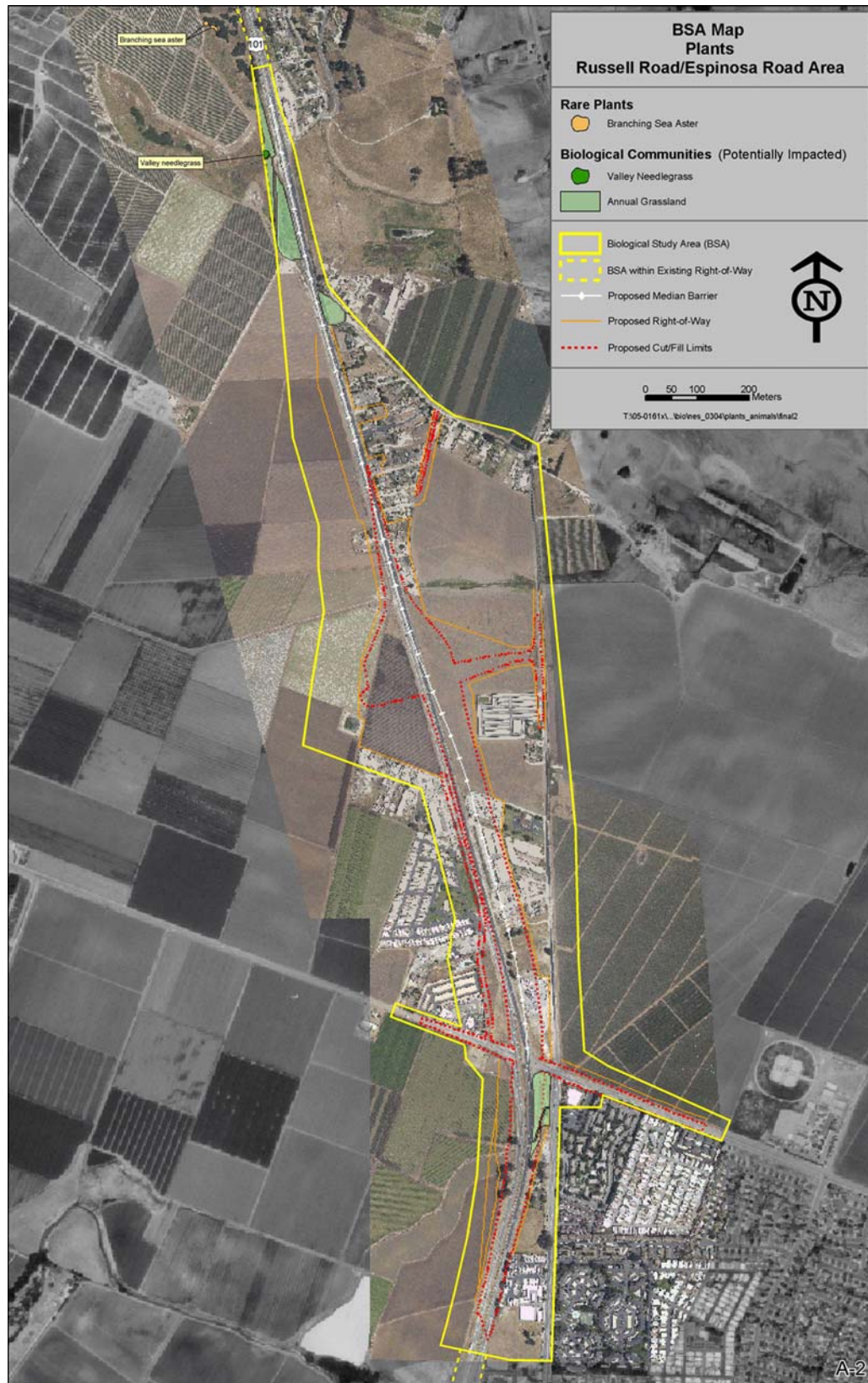
All impacts to sensitive plant species and plant communities would be fully mitigated during and after construction. Temporal impacts to listed plants and communities are not considered to be applicable, since they do not migrate and construction is not anticipated to interfere with reproduction locally or regionally.

The effects of temporal impacts to sensitive wildlife species are expected to be immeasurable. Prunedale Creek within the Biological Study Area is considered to primarily serve, at best, as a movement corridor for the Western pond turtle and California red-legged frog, and lacks features associated with high-quality reproductive and foraging habitat. The relatively minor impacts to Prunedale Creek

(i.e., no measurable interference with corridor movement) within the Biological Study Area would occur sufficiently distant from other waterways of the Prunedale region and not proceed for such a length of time to measurably contribute to a cumulative effect.

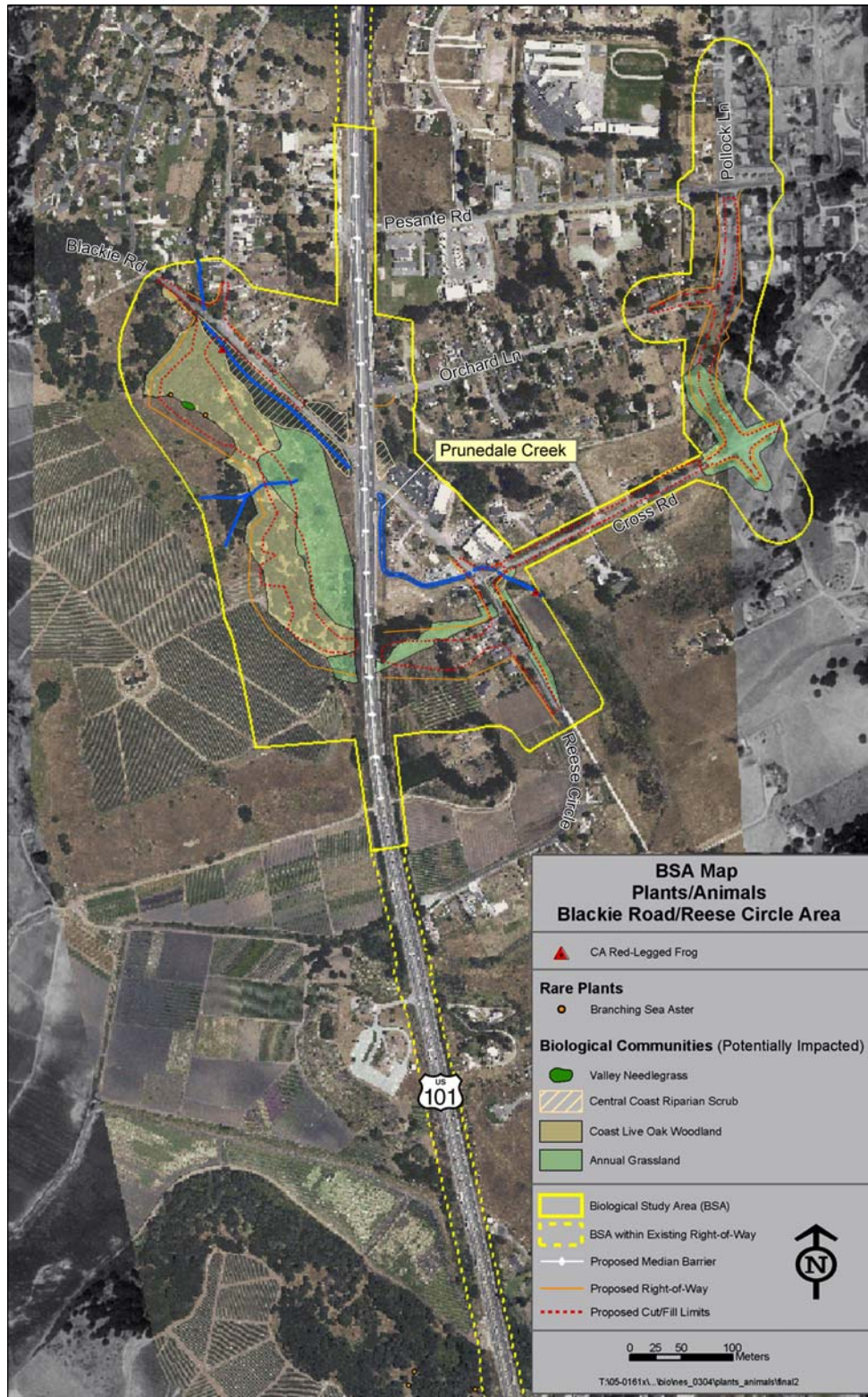
Impacts to the Monterey dusky-footed woodrat would include the permanent removal of habitat. However, preconstruction surveys would be conducted, and, if necessary, Environmentally Sensitive Areas and onsite monitoring would be implemented to avoid impacts to this species. This species is regionally abundant and there is suitable alternate habitat for the Monterey dusky-footed woodrat throughout the Prunedale area. Thus, it is not anticipated that the project would contribute to a temporally cumulative effect.

No other projects that would be included in a temporally cumulative effect analysis are known to occur within the local project area.



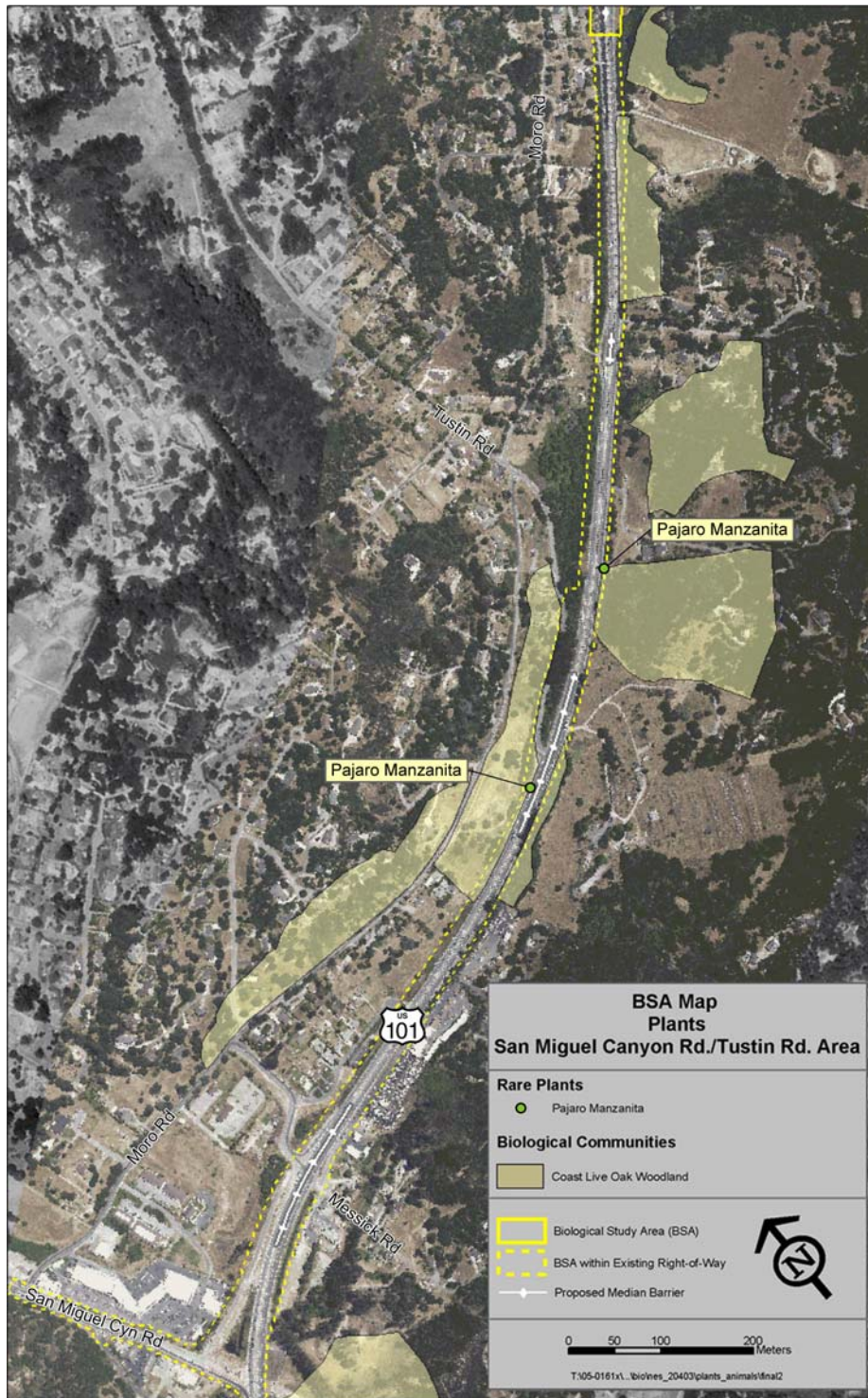
Note: Legend was revised for final document

Figure 3-35 Sensitive Species in the Russell Road/Espinosa Road Area



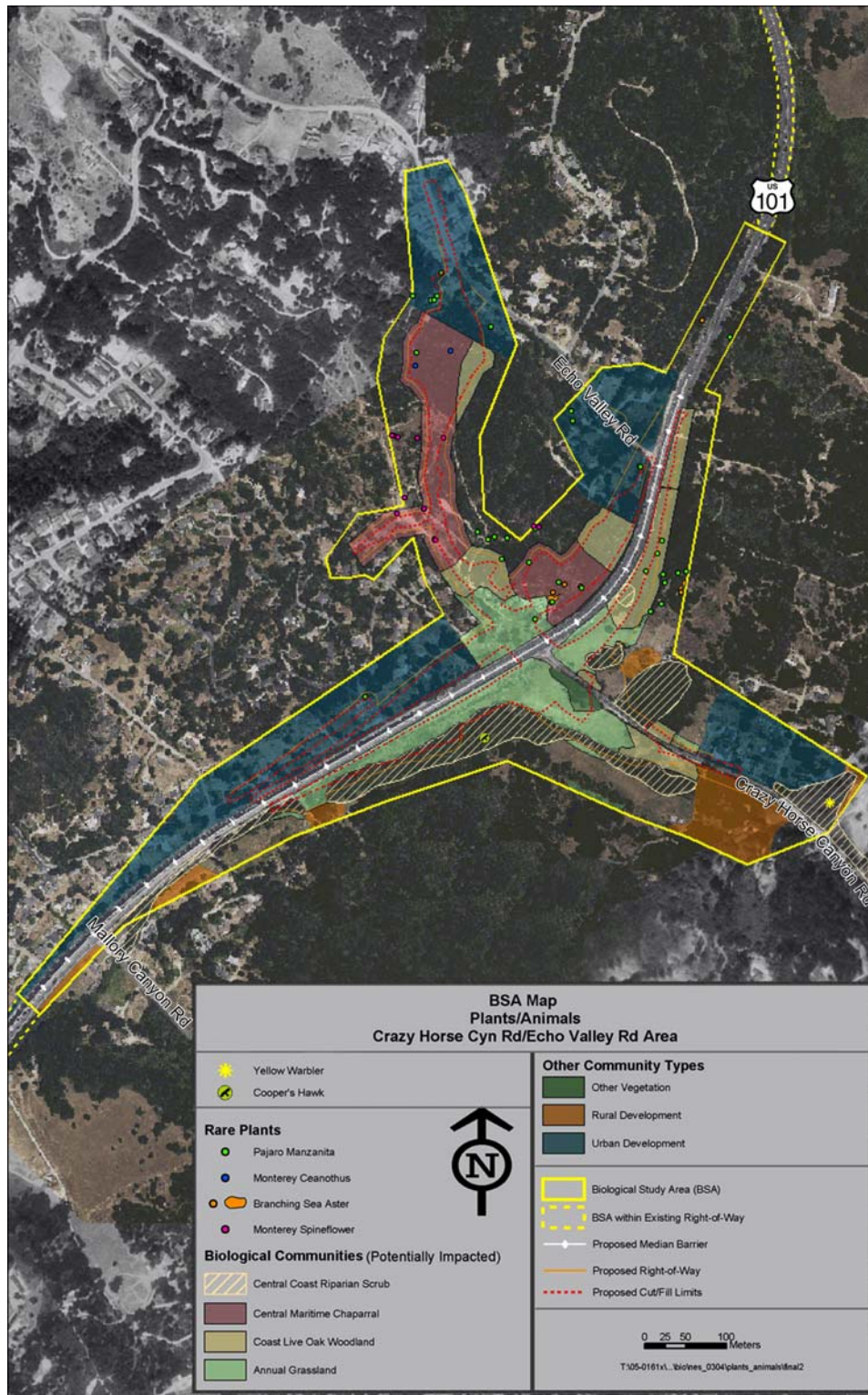
Note: Legend was revised for final document

Figure 3-36 Sensitive Species in the Blackie Road/Reese Circle Area



Note: Legend was revised for final document

Figure 3-37 Sensitive Species in the San Miguel Canyon Road Area



Note: Legend was revised for final document

Figure 3-38 Sensitive Species in the Crazy Horse Canyon Road Area

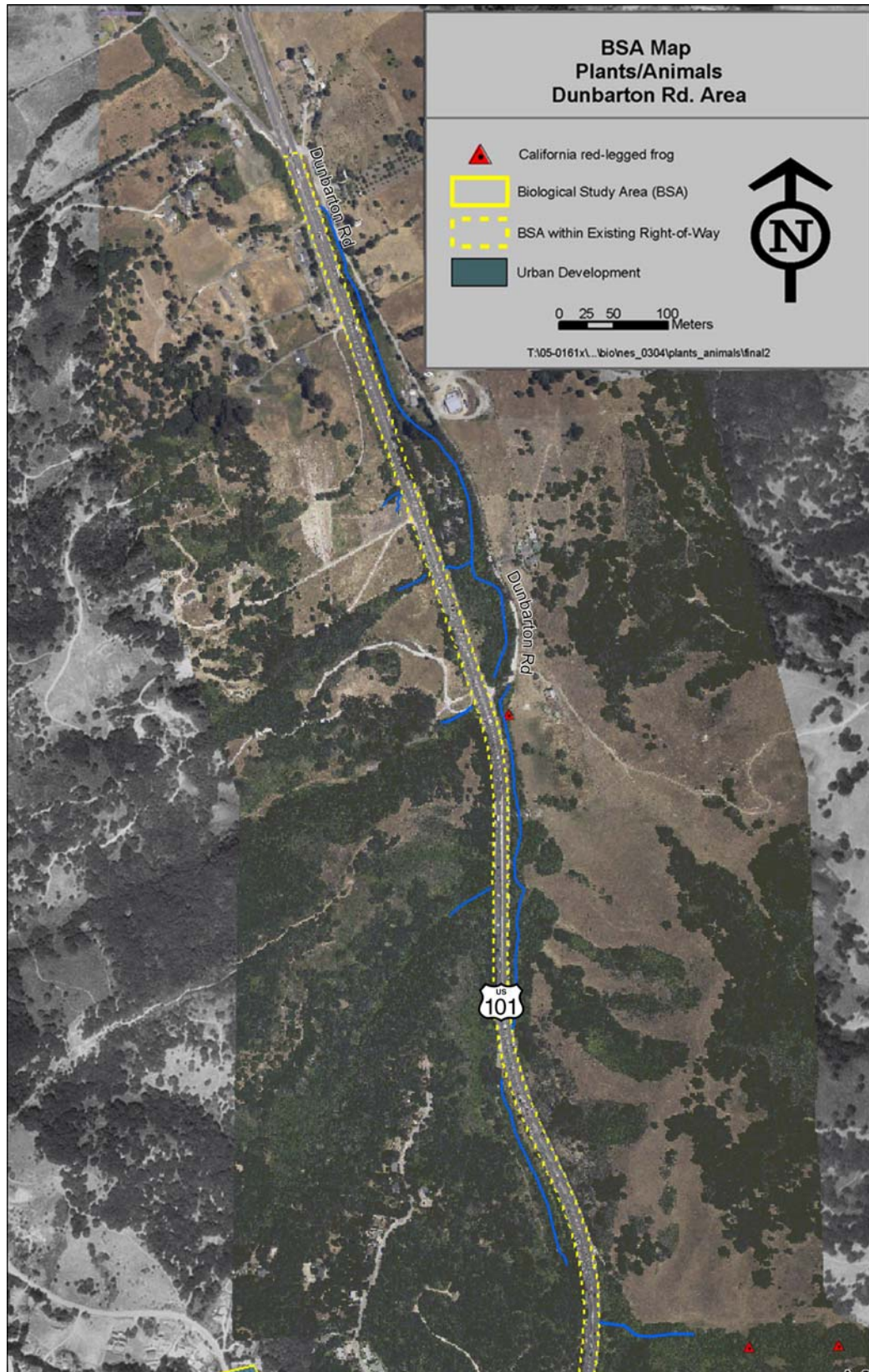


Figure 3-39 Sensitive Species in the Dunbarton Road Area

Chapter 4 California Environmental Quality Act Evaluation

4.1 Determining Significance Under the California Environmental Quality Act

The proposed project is a joint project by the California Department of Transportation (Caltrans) and the Federal Highway Administration and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act and the National Environmental Policy Act. Caltrans is the lead agency under the California Environmental Quality Act and the Federal Highway Administration is lead agency under the National Environmental Policy Act.

One of the primary differences between the National Environmental Policy Act and the California Environmental Quality Act is the way significance is determined. Under the National Environmental Policy Act, significance is used to determine whether an Environmental Impact Statement, or some lower level of documentation, will be required. The National Environmental Policy Act requires that an Environmental Impact Statement be prepared when the proposed federal action (project) *as a whole* has the potential to “significantly affect the quality of the human environment.” The determination of significance is based on context and intensity. Some impacts determined to be significant under the California Environmental Quality Act may not be of sufficient magnitude to be determined significant under the National Environmental Policy Act. Under the National Environmental Policy Act, once a decision is made regarding the need for an Environmental Impact Statement, it is the magnitude of the impact that is evaluated and no judgment of its individual significance is deemed important for the text. The National Environmental Policy Act does not require that a determination of significant impacts be stated in the environmental documents.

The California Environmental Quality Act, on the other hand, does require Caltrans to identify each “significant effect on the environment” resulting from the project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an Environmental Impact Report must be prepared. Each significant effect on the environment must be disclosed in the Environmental Impact Report and mitigated if feasible. In addition, the California

Environmental Quality Act Guidelines list a number of mandatory findings of significance, which also require the preparation of an Environmental Impact Report. There are no types of actions under the National Environmental Policy Act that parallel the findings of mandatory significance of the California Environmental Quality Act. Please see Chapter 3 of this document for a discussion regarding the effects of this project and the California Environmental Quality Act significance.

As stated above, some impacts determined to be significant under the California Environmental Quality Act may not lead to a determination of significance under the National Environmental Policy Act. Because the National Environmental Policy Act is concerned with the significance of the project as a whole, it is quite often the case that a “lower level” document is prepared for the National Environmental Policy Act. One of the most commonly seen joint document types is an Environmental Impact Report/Environmental Assessment.

Following receipt of public comments on the Draft Environmental Impact Report/Environmental Assessment and circulation of the Final Environmental Impact Report/Environmental Assessment, the lead agencies will be required to take actions regarding the environmental document. Caltrans will determine whether to certify that the Environmental Impact Report and issue Findings and a Statement of Overriding Considerations and the Federal Highway Administration will decide whether to issue a Finding of No Significant Impact or require an Environmental Impact Statement.

4.2 Discussion of Significant Impacts

The project would have an affect on the following resources. Where possible, significant impacts would be avoided by the implementation of mitigation measures.

- Aesthetics (Visual Resources)
- Biological resources
- Hydrology and water quality

4.3 Mitigation Measures for Significant Impacts Under the California Environmental Quality Act

Mitigation measures for potentially significant impacts are:

- Aesthetics (Visual Resources) – measures would seek to preserve or enhance key existing scenic qualities, frame desirable vistas, screen or distract from undesirable views, use forms and materials that are well related to other existing elements, and apply aesthetic treatments that fit the visual character of the area. (Refer to the Section 3.7 for additional information)
- Biological resources – measures would use state land and/or other land within the area that would provide the opportunity for preservation, restoration, and enhancement.
- Hydrology and water quality – detention/retention basins would be used within the area and specific permits required by the project would be obtained.



Chapter 5 Summary of Public/Agency Involvement Process/Tribal Coordination

Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process to determine the scope of environmental documentation, the level of analysis, potential impacts and mitigation measures, and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including project development team meetings, interagency coordination meetings, and public outreach meetings. This chapter summarizes the results of Caltrans' efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

5.1 Local Government/Planning Department

The County of Monterey and the Transportation Agency of Monterey County are active participants in the planning, development, and funding of the proposed project.

5.2 Public Involvement

On October 29, 2003, an Open House was held in the auditorium of the North Monterey High School in Castroville, California. Notices in the local newspapers and an invitation were mailed to interested parties and businesses.

Representatives from Caltrans, the Transportation Agency for Monterey County, and Monterey County were available from 4:00 p.m. until 8:30 p.m. A presentation was given by Caltrans, the Transportation Agency for Monterey County, and Monterey County officials, followed by a short question and answer session. The questions were submitted anonymously and in writing and answered by the panel. Display boards, handouts, and maps were on display and staff was available to answer questions. Approximately 170 individuals attended the meeting. Some of the main concerns raised included: access to and from Route 101, local circulation and road connections, business and residential relocations, safety, lengthy time-frame of project, community resources, and growth.

The Draft Environmental Impact Report/Environmental Assessment was circulated for public review May 21, 2005 to July 7, 2005. Copies of the document were sent to the parties listed in the distribution list and also to those requesting a copy. The

document was also made available for public review on the project website at www.dot.ca.gov/dist05/prunedale/index.htm, the office of the Transportation Agency for Monterey County, and local libraries in both Salinas and Prunedale.

A public notice was published announcing the availability of the Draft Environmental Impact Report/Environmental Assessment, where it could be obtained, and whom to contact with questions. It also announced the public hearing for June 23, 2005. The Public Notice was published in the following papers on the listed dates:

The Salinas Californian	Saturday May 21,2005
The Monterey County Herald	Saturday May 21,2005
The Monterey County Herald	Tuesday May 31,2005
The Monterey County Herald	Monday June 13, 2005
The Salinas Californian	Monday June 13, 2005

Invitations to the Public Hearing were sent to approximately 1,500 individuals and displayed at businesses in the Prunedale and Salinas area.

The public hearing was held from 4:00 p.m. to 8:30 p.m. on Thursday, June 23, 2005 at the North Monterey County High School, 13990 Castroville Blvd, Castroville, California.

The inside cover of the draft document asked for public comments on the proposed project and on the draft document. All comments received during the public circulation period are provided in Volume II, Comments and Responses of the Final Environmental Impact Report/Environmental Assessment with Finding of No Significant Impact.

5.3 Native American Heritage Commission

On October 15, 2003, Caltrans sent a letter to the Native American Heritage Commission requesting a search of its files to determine if any sacred sites, plant gathering locations, or traditional cultural properties were known to exist in the vicinity of the proposed project. Ms. Debbie Pilas-Treadway of the Native American Heritage Commission returned a letter to Caltrans on October 22, 2003, stating their files did not indicate the presence of Native American cultural resources in the immediate project area. The letter also included a list of 14 Native American individuals who may have concerns about the proposed project or have special knowledge of cultural resources in the project vicinity.

5.4 Native American Groups

Individuals listed by the Native American Heritage Commission were sent a letter, which described the project, the results of previous studies in the area, and the results of the archaeological survey, and requested their input about the proposed project. The letter was sent to additional Native American individuals who were involved with cultural resources studies for the Prunedale Freeway Project. The only comments received to date have been requests that Caltrans notify Native American representatives in the event that items of historic value or human remains are unearthed during excavation.

5.5 Local Historical Society/Historical Preservation Groups

The Monterey County Historical Society in Salinas and the Monterey County Agricultural and Rural Life Museum in King City also were sent letters describing the project, the results of previous studies in the area, and the results of the archaeological survey. No comments were received from these historical societies.

5.6 Biological Resources Coordination

On November 10, 2003, the Caltrans biologist met with the following agencies to introduce the Prunedale Improvement Project and discuss potential compensation, restoration, and preservation needs and options: the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, and the California Department of Fish and Game.

An onsite field meeting was conducted on December 9, 2003 with the California Department of Fish and Game.

On April 19, 2005, the U.S. Fish and Wildlife Service office acknowledged receiving the Biological Assessment, which was submitted to initiate Section 7 consultation for the proposed effects to listed species. A Biological Opinion was received on October 18, 2005, concluding the Section 7 formal consultation process.



Chapter 6 List of Preparers

Abdulrahim N. Chafi, Transportation Engineer. B.S. Chemistry, M.S. Chemistry, M.S. Civil/Environmental Engineering, Ph.D. Engineering Management. 1 year Air Quality Engineer at San Joaquin Valley Unified Air Pollution Control District, 7 years Environmental Engineer. Contribution: Air Technical Study.

Steven T. Croteau, Associate Environmental Planner. B.S. Natural Resources. 5 years experience in environmental planning. Contribution: Environmental Planning Coordinator, document preparer.

Ken Doran, Engineering Geologist. A.A. Natural Science, B.A. Geology, MA Geology. 5 years Hazardous Waste. Contribution: Hazardous Waste Technical Study.

David Franke, Design Senior. B.S. in Civil Engineering. 16 years experience as a transportation engineer, 7 years as a Senior Transportation Engineer. Contribution: Design Manager.

Kay Goshgarian, Associate Environmental Planner. M.S., Environmental Management, B.S. Agricultural (Plant) Science. 5 years environmental planning. Contribution: Community Impact Assessment.

Corby C. Kilmer, Associate Landscape Architect. B.S. Landscape Architecture. 10 years experience in landscape architecture design and document preparation. Licensed Landscape Architect No.4131. Contribution: Visual Impact Assessment.

Stephanie Kulzer-Voss, Environmental Planner. B.S. Environmental Science and Biology. 4 years experience in environmental planning. Contribution: Environmental Planning Coordinator, document preparer.

John Magorian, Associate Right-of-Way Agent. B.S. Business Administration (Finance and Property Management). Experience in Real Estate Title work and Real Estate Sales, more than 17 years Real Estate Appraisal, and 5 years

Right-of-Way (Acquisition). Contribution: Relocation Impact Statement (Draft).

Dan Massa, Transportation Engineer. B. S. Civil Engineering. 11 years engineering experience, including 6 years in transportation design. Contribution: Project Engineer.

Wayne W. Mills, Transportation Engineer. B.A. Social Science, B.A. Earth Science. 19 years experience in environmental engineering. Contribution: Noise Technical Report, Paleontology Report, and Vibration Study.

Don Nishikawa, B.S. Civil Engineering. 16 years experience with Caltrans, 4 years with Hydraulics Department. Contribution: Location Hydraulic Study and Floodplain Evaluation preparer.

Eric Olson, Transportation Engineer. B.S. Civil Engineering. 6 years experience transportation design. Contribution: Project Engineer.

Bobi Lyon-Ritter, B.A. Fine Arts, MLA Landscape Architecture. 12 years experience planning and design, 6 years experience environmental planning. Contribution: Environmental Manager.

Christopher Ryan, Associate Environmental Planner (Archaeology). MA Anthropology, 13 years experience cultural resources management. Contribution: archaeological surveyor, Archaeological Survey Report co-author, Historic Property Survey Report author.

Nancy Siepel, Associate Environmental Planner (Natural Science). BS Vertebrate Zoology. 23 years experience as a Wildlife/Fisheries Biologist. Contribution: Natural Environmental Study/Biological Assessment.

David M. Silberberger, Professional Engineer. Project Management Professional. B.S. Civil Engineering. 17 years experience in engineering and project management. Contribution: Project Manager.

Geoffrey Gray, Associate Environmental Planner (Natural Science). M.A. Biology (Plant Ecology). 11 years experience in biology. Contribution: Biological Assessment

Rajeev L. Dwivedi, Engineering Geologist. B.S. Engineering Geology, M.S. Geology, M.S. Civil Engineering, Ph.D. Environmental Science. 17 years experience as a Water Quality/Management Specialist. Contribution: Water Quality Study

Kristen Merriman, Associate Environmental Planner. B. A. Anthropology, 5 years experience environmental planning. Contribution: Coordinator and final environmental document preparation.



Chapter 7 Distribution List

FEDERAL AGENCIES

Mike Johanns, Secretary of Agriculture
U.S. Department of Agriculture, Stop
0101
1400 Independence Ave. SW
Whitten Building
Washington, D.C. 20250

Mike Collins, Assistant State
Conservationist
USDA Natural Resources Conservation
Service, Area 2 Office
318 Cayuga Street, Suite 206
Salinas, CA 93901-2668

John Yeakel
U.S. Army Corps of Engineers
333 Market Street
San Francisco, CA 94105-2102

Edward A. Wylie
Chief, South Section Regulatory Branch
U.S. Army Corps of Engineers
333 Market Street
San Francisco, CA 94105-2102

Dr. Willie Taylor
Office of Environmental Policy and
Compliance
1849 C Street NW, Room 2340
Washington, D.C. 20240

Patricia Port, Regional Environmental
Officer
Office of Environmental Policy &
Compliance
Oakland Region, Jackson Center One
1111 Jackson Street, Suite 520
Oakland, CA 94607

P. Patrick Leahy, Acting Director
U.S. Geological Survey
Headquarters

Environmental Assessment Program
12201 Sunrise Valley Drive
Reston, VA 20192

Daniel Mountjoy, Acting District
Conservationist
USDA Natural Resources Conservation
Service, Salinas Service Center
744-A LaGuardia St., Bldg. A
Salinas, CA 93905-3354

David Pereksta, Assistant Field
Supervisor
U.S. Fish & Wildlife Service
2493 Portola Road, Suite B
Ventura, CA 93003-7726

Wayne Nastri, Regional Administrator
Environmental Protection Agency,
Region IX
75 Hawthorne
San Francisco, CA 94105-3901

Nova Blazej, Acting Manager
Environmental Review Office
Environmental Protection Agency,
Region IX
75 Hawthorne
San Francisco, CA 94105-3901

Richard K. Rainey, Regional Director
Dept. of Housing and Urban
Development
Region IX
600 Harrison St., Third Floor
San Francisco, CA 94102

Lincoln Burton, State Conservationist
USDA Natural Resources Conservation
Service
430 G Street, 4164
Davis, CA 95616-4164

STATE AGENCIES

Governor's Office of Planning and
Research
State Clearinghouse and Planning Unit
P.O. Box 3044
Sacramento, CA 95812-3044

Dennis J. O'Bryant, Acting Assistant
Director
Department of Conservation
801 K Street, MS 18-01
Sacramento, CA 95814

Rob Floerke, Regional Manager
California Department of Fish & Game
Central Coast Region (Region 3)
PO Box 47
Yountville, CA 94599

Calif. Dept. of Fish & Game
Habitat Conservation Planning Branch
1416 9th Street, Suite 1341
Sacramento, CA 95814

Office of Historic Preservation
Dept. of Parks and Recreation
P.O. Box 942896
Sacramento, CA 94296-0001

The Reclamation Board
P.O. Box 942836
Sacramento, CA 94236

Barbara McDonnell, Chief
Calif. Dept. of Water Resources
Division of Environmental Services
P.O. Box 942836
Sacramento, CA 94236

California Highway Patrol
Special Projects Section
2555 1st Avenue
Sacramento, CA 95818

California Department of Housing and

Community Development
Division of Housing Policy Division
P.O. Box 952053
Sacramento, CA 94252-2053

Robert Sleppy, Section Chief
California Department of General
Services
Real Estate Services Division
Environmental Services Section
707 Third Street, Third Floor
West Sacramento, CA 95605

Calif. Air Resources Board
Air Quality and Transportation Planning
P.O. Box 2815
Sacramento, CA 95812

California State Water Resources
Control Board
California Integrated Water Quality
Systems
P.O. Box 100
Sacramento, CA 95812

California Department of Toxic
Substance Control
P.O. Box 806
Sacramento, CA 95812-2828

California Energy Commission
1516 Ninth Street, MS-29
Sacramento, CA 95814-5504

Native American Heritage Commission
915 Capitol Mall, Room 364
Sacramento, CA 95814

Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

Paul D. Thayer, Executive Director
California State Lands Commission
100 Howe Avenue, Suite 100 South
Sacramento, CA 95825-8202

Walter W. Briggs, Executive Officer
Central Coast Regional Water
Quality Control Board
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401

ELECTED OFFICIALS

Honorable Barbara Boxer
United States Senator
112 Hart Senate Office Building
Washington, DC 20510

Honorable Dianne Feinstein
United States Senator
331 Hart Senate Office Building
Washington, DC 20510

Congressman Sam Farr
100 West Alisal Street
Salinas, CA 93901
Fred Meurer, City Manager
City of Monterey, City Hall
Monterey, CA 93940

Louis R. Calcagno
District 2 Supervisor
Castroville Courthouse
10681 McDougall Street
Castroville, CA 95012

LOCAL AGENCIES

Tom Quigley, Executive Director
San Benito County Council of
Governments
3216 Southside Road
Hollister, CA 95023

Curtis Weeks, General Manager
Monterey Co. Water Resources Agency
893 Blanco Circle
Salinas, CA 93901

Douglas Quetin, Air Pollution Control
Officer

Monterey Bay Unif. Air Pollution
Control District
24580 Silver Cloud Court
Monterey, CA 93940

Jean Getchell, Supervising Planner
Planning and Air Monitoring Division
Monterey Bay Unif. Air Pollution
Control District
24580 Silver Cloud Court
Monterey, CA 93940

Nick Chiulos, Principal Administrator
Monterey County Intergovernmental
Affairs
230 Church Street, Building 3
Salinas, CA 93901

Ronald Lundquist, Director
Monterey County Public Works
Department
168 W. Alisal Street
Salinas, CA 93901

Margaret Clovis, Historian
Historic Resources Review Board
Monterey County Parks
P.O. Box 5249
Salinas, CA 93915

Parks Foundation
P.O. Box 5249
Salinas, CA 93915

Nicolas Papadakis, Executive Director
Assoc. Monterey Bay Area
Governments
445 Reservation Road
Marina, CA 93933

Jeff Morgan
Transportation Agency for Monterey
County
55-B Plaza Circle
Salinas, CA 93901

Mary Claypool, Director
Overall Economic Development
Commission
168 W. Alisal Street
Salinas, CA 93901

Keith Israel, General Manager
Monterey Regional Water
Pollution Control Agency
5 Harris Court Building D
Monterey, CA 93940

Chris Orman, Chief
North County Fire District
11200 Speegle Street
Castroville, CA 95012

Rob Russell, Deputy City Manager
City of Salinas, Department of
Development and Engineering
200 Lincoln Avenue
Salinas, CA 93901

Enrique Saavedra, Senior Civil Engineer
Monterey County Public Works
Department
Environmental Services Division
312 East Alisal Street
Salinas, CA 93901

General Manager
Monterey-Salinas Transit (MST)
One Ryan Ranch Road
Monterey, CA 93940

Scott Hennessy, Department Director
Monterey County Planning and Building
Inspection
168 W. Alisal Street, 2nd Floor
Salinas, CA 93901

Emily Hansen, Executive Director
Resource Conservation District
of Monterey County
744-A La Guardia, Bldg. A
Salinas, CA 93905

Mike Kanalakakis, Sheriff
Office of the Sheriff
County of Monterey
1414 Natividad Road
Salinas, CA 93906

Keith Parkhurst, Superintendent
North Monterey County Unified School
District
8142 Moss Landing Road
Moss Landing, CA 95039

Hugh F. Stallworth, M.D., M.P.H.
Office of the Health Officer
Monterey County Health Department
1270 Natividad Road #B304
Salinas, CA 93906

Bob Perkins, Executive Director
Monterey County Farm Bureau
P.O. Box 1449
Salinas, CA 93902

Sam Mazza, Unit Chief
Department of Forestry and Fire
Protection
San Benito-Monterey Unit
2221 Garden Road
Monterey, CA 93940-5317

NOTE:

In addition to the preceding list, copies were made available to all individuals who made substantial comments on the draft environmental document or attended the public hearing, and to those who requested copies.

Chapter 8 References

Supplemental Historic Property Survey Report, California Department of Transportation, September 2004.

Historic Property Survey Report, California Department of Transportation, November 15, 2003.

Water Quality Report, California Department of Transportation, October 21, 2003.

Noise Study Report, California Department of Transportation, February 14 2006.

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Location Hydraulic Study, California Department of Transportation, November 15, 2003.

Natural Environmental Study, California Department of Transportation, September 20, 2004.

Biological Assessment, California Department of Transportation, April 2005.

Traffic Operational Analysis, California Department of Transportation, June 2004.

U.S. Census Bureau. U.S. Census 2000. <http://www.census.gov>



Appendix A California Environmental Quality Act Checklist

The following checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. The California Environmental Quality Act impact levels include potentially significant impact, less than significant impact with mitigation, less than significant impact, and no impact. Information and analysis that supports these determinations can be found in Chapter 3. Chapter 4 summarizes California Environmental Quality Act significance findings.

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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AESTHETICS - Would the project:

a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

AGRICULTURE RESOURCES - In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

AIR QUALITY - Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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d) Expose sensitive receptors to substantial pollutant concentration?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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e) Create objectionable odors affecting a substantial number of people?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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BIOLOGICAL RESOURCES - Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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COMMUNITY RESOURCES - Would the project:

a) Cause disruption of orderly planned development?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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b) Be inconsistent with a Coastal Zone Management Plan?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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c) Affect life-styles, or neighborhood character or stability?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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d) Physically divide an established community?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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e) Affect minority, low-income, elderly, disabled, transit-dependent, or other specific interest group?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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f) Affect employment, industry, or commerce, or require the displacement of businesses or farms?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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g) Affect property values or the local tax base?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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h) Affect any community facilities (including medical, educational, scientific, or religious institutions, ceremonial sites or sacred shrines)?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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i) Result in alterations to waterborne, rail, or air traffic?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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j) Support large commercial or residential development?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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k) Affect wild or scenic rivers or natural landmarks?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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l) Result in substantial impacts associated with construction activities (e.g., noise, dust, temporary drainage, traffic detours, and temporary access, etc.)?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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CULTURAL RESOURCES - Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

GEOLOGY AND SOILS - Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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HAZARDS AND HAZARDOUS MATERIALS - Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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c) Emit hazardous emissions or handle hazardous or acutely hazardous material, substances, or waste within one-quarter mile of an existing or proposed school?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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HYDROLOGY AND WATER QUALITY - Would the project:

a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on or offsite?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or offsite?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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LAND USE AND PLANNING - Would the project:

a) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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b) Conflict with any applicable habitat conservation plan or natural community conservation plan?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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MINERAL RESOURCES - Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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NOISE - Would the project cause:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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POPULATION AND HOUSING - Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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PUBLIC SERVICES -

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

Fire protection?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Police protection?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Schools?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Parks?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Other public facilities?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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RECREATION -

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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TRANSPORTATION/TRAFFIC - Would the project:

a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incomplete uses (e.g., farm equipment)?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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e) Result in inadequate emergency access?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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f) Result in inadequate parking capacity?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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UTILITY AND SERVICE SYSTEMS - Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
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e) Result in determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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g) Comply with federal, state, and local statutes and regulations related to solid waste?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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MANDATORY FINDINGS OF SIGNIFICANCE -

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, or cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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SECTION 4(f) RESOURCES - Does the project:

a) Result in the use of any publicly owned land from a park, recreation area, or wildlife and waterfowl refuge, as defined by section 4(f) (23 CFR 771.135)?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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b) Affect a significant archaeological or historic site, structure, object, or building, as defined by section 4(f) (23 CFR 771.135)?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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c) Involve "constructive use," as defined by section 4(f) (23 CFR 771.135)?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Appendix B Title VI Policy Statement

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY

ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
1120 N STREET
P. O. BOX 942873
SACRAMENTO, CA 94273-0001
PHONE (916) 654-5266
FAX (916) 654-6608
TTY (916) 653-4086



*Flex your power!
Be energy efficient!*

January 14, 2005

TITLE VI POLICY STATEMENT

The California Department of Transportation under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, and age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.


WILL KEMPTON
Director

"Caltrans improves mobility across California"



Appendix C Summary of Relocation Benefits

California Department of Transportation Relocation Assistance Program

RELOCATION ASSISTANCE ADVISORY SERVICES

The California Department of Transportation (Caltrans) would provide relocation advisory assistance to any person, business, farm, or non-profit organization displaced as a result of Caltrans' acquisition of real property for public use. Caltrans would assist residential displacees in obtaining comparable decent, safe, and sanitary replacement housing by providing current and continuing information on sales prices and rental rates of available housing. Non-residential displacees would receive information on comparable properties for lease or purchase.

Residential replacement dwellings would be in equal or better neighborhoods, at prices within the financial means of the individuals and families displaced, and reasonably accessible to their places of employment. Before any displacement occurs, displacees would be offered comparable replacement dwellings that are open to all persons regardless of race, color, religion, sex, or national origin, and are consistent with the requirements of Title VIII of the Civil Rights Act of 1968. This assistance would also include supplying information concerning federal and state assisted housing programs, and any other known services being offered by public and private agencies in the area.

RESIDENTIAL RELOCATION PAYMENTS PROGRAM

The Relocation Payment program would assist eligible residential occupants by paying certain costs and expenses. These costs are limited to those necessary for, or incidental to, purchasing or renting a replacement dwelling, and actual reasonable expenses incurred in moving to a new location within 80 kilometers (50 miles) of displacee's property. Any actual moving costs in excess of 80 kilometers (50 miles) are the responsibility of the displacee. The Residential Relocation Program can be summarized as follows:

Moving Costs

Any displaced person who was "lawfully" in occupancy of the acquired property regardless of the length of occupancy in the property acquired would be eligible for reimbursement of moving costs. Displacees would receive either the actual reasonable costs involved in moving themselves and personal property up to a maximum of 80 kilometers (50 miles), a moving service authorization, or a fixed payment based on a

fixed moving cost schedule, which is determined by the number of furnished or unfurnished rooms of the displacement dwelling.

Purchase Supplement

In addition to moving and related expenses payments, fully eligible homeowners may be entitled to payments for increased costs of purchasing replacement housing.

Homeowners who have owned and occupied their property for 180 days prior to the date of the first written offer to purchase the property, may qualify to receive a price differential payment equal to the difference between Caltrans' offer to purchase their property and the price of a comparable replacement dwelling, and may qualify to receive reimbursement for certain nonrecurring costs incidental to the purchase of the replacement property. An interest differential payment is also available if the interest rate for the loan on the replacement dwelling is higher than the loan rate on the displacement dwelling, subject to certain limitations on reimbursement based on the replacement property interest rate. Also, the interest differential must be based on the "lesser of" either the loan on the displacement property or the loan on the replacement property. The maximum combination of these three supplemental payments that the owner-occupants can receive is \$22,500. If the calculated total entitlement (without the moving payments) is in excess of \$22,500, the displacee may qualify for the Last Resort Housing described below.

Rental Supplement

Tenants who have occupied the property to be acquired by Caltrans for 90 days or more and owner-occupants who have occupied the property 90 to 180 days prior to the date of the first written offer to purchase, may qualify to receive a rental differential payment.

This payment is made when Caltrans determines that the cost to rent a comparable and "decent, safe, and sanitary" replacement dwelling would be more than the present rent of the displacement dwelling. As an alternative, the eligible occupant may qualify for a down payment benefit designed to assist in the purchase of a replacement property and the payment of certain costs incidental to the purchase, subject to certain limitation noted below under the "Down Payment" section (see below). The maximum amount of payment to any tenant of 90 days or more and any owner-occupant of 90 to 179 days, in addition to moving expenses, would be \$5,250. If the calculated total entitlement for rental supplement exceeds \$5,250, the displacee may qualify for the Last Resort Housing Program described below.

The rental supplement of \$7,500 or less would be paid in a lump sum, unless the displacee requests that it be paid in installments. The displaced person must rent and occupy a “decent, safe, and sanitary” replacement dwelling within one year from the date Caltrans takes legal possession of the property, or from the date the displacee vacates the Caltrans-acquired property, whichever is later.

Down Payment

Displacees eligible to receive a rental differential payment may elect to apply it to a down payment for the purchase of a comparable replacement dwelling. The down payment and incidental expenses cannot exceed the maximum payment of \$5,250, unless the Last Resort Housing Program is indicated. The one-year eligibility period in which to purchase and occupy a “decent, safe, and sanitary” replacement dwelling would apply.

Last Resort Housing

Federal regulations (49 CFR 24.404) contain the policy and procedure for implementing the Last Resort Housing Program on federal aid projects. To maintain uniformity in the program, Caltrans has also adopted these federal guidelines on non-federal-aid projects. Except for the amounts of payments and the methods in making them, last resort housing benefits are the same as those benefits for standard relocation as explained above. Last resort housing has been designed primarily to cover situations where available comparable replacement housing does not exist or when anticipated replacement housing payments, exceed the \$2,520 and \$22,500 limits of the standard relocation procedures. In certain exceptional situations, last resort housing may also be used for tenants of less than 90 days.

After the first written offer to acquire the property has been made, Caltrans would, within a reasonable length of time, personally contact the displacees to gather important information relating to:

- Preferences in area of relocation.
- Number of people to be displaced and the distribution of adults and children according to age and sex.
- Location of school and employment.
- Special arrangements to accommodate any handicapped member of the family.
- Financial ability to relocate into comparable replacement dwelling, which would house all members of the family decently.

The above explanation is general in nature and is not intended to be a complete explanation of relocation regulations. Any questions concerning relocation should be addressed to Caltrans. Any persons to be displaced would be assigned a relocation advisor who would work closely with each displacee to see that all payments and benefits are fully used, and that all regulations are observed, thereby avoiding the possibility of displacees jeopardizing or forfeiting any of their benefits or payments.

THE BUSINESS AND FARM RELOCATION ASSISTANCE PROGRAM

The Business and Farm Relocation Assistance Program provides aid in locating suitable replacement property for the displacee's farm or business, including, when requested, a current list of properties offered for sale or rent. In addition, certain types of payments are available to businesses, farms, and non-profit organizations. These payments may be summarized as follows:

- Reimbursement for the actual direct loss of tangible personal property incurred as a result of moving or discontinuing the business in an amount not greater than the reasonable cost of relocating the property.
- Reimbursement up to \$1,000 of actual reasonable expenses in searching for a new business site.
- Reimbursement up to \$10,000 of actual reasonable expenses related to the reestablishment of the business at the new location
- Reimbursement of the actual reasonable cost of moving inventory, machinery, office equipment, and similar business-related personal property, including dismantling, disconnecting, crating, packing, loading, insuring, transporting, unloading, unpacking, and reconnecting personal property.

Payment "in lieu" of moving expense is available to businesses that are expected to suffer a substantial loss of existing patronage as a result of the displacement, or if certain other requirements such as inability to find a suitable relocation site are met. This payment is an amount equal to the average annual net earnings for the last two taxable years before relocation. Such payment may not be less than \$1,000 and not more than \$20,000.

ADDITIONAL INFORMATION

No relocation payment received would be considered as income for the purpose of the Internal Revenue Code of 1954 or for the purposes of determining eligibility or the extent

of eligibility of any person for assistance under the Social Security Act or any other federal law (except for any federal law providing low-income housing assistance). Persons who are eligible for relocation payments and who are legally occupying the property required for the project would not be asked to move without being given at least 90 days advance notice, in writing. Occupants of any type of dwelling eligible for relocation payments would not be required to move unless at least one comparable "decent, safe, and sanitary" replacement residence, open to all persons regardless of race, color, religion, sex, or national origin, is available or has been made available to them by the state.

Any person, business, farm, or non-profit organization, which has been refused a relocation payment by Caltrans, or believes that the payments are inadequate, may appeal for a hearing before a hearing officer or Caltrans Relocation Assistance Appeals Board. No legal assistance is required; however, the displacee may choose to obtain legal council at his/her expense. Information about the appeal procedure is available from Caltrans Relocation Advisors.

The information above is not intended to be a complete statement of all of Caltrans' laws and regulations. At the time of the first written offer to purchase, owner-occupants are given a more detailed explanation of the state's relocation services. Tenant occupants of properties to be acquired are contacted immediately after the first written offer to purchase, and also given a more detailed explanation of Caltrans relocation programs.

IMPORTANT NOTICE

To avoid loss of possible benefits, no individual, family, business, farm, or non-profit organization should commit to purchase or rent a replacement property without first contacting a Caltrans relocation advisor at:

State of California
Department of Transportation, District #6
855 "M" Street
Fresno, CA 93721

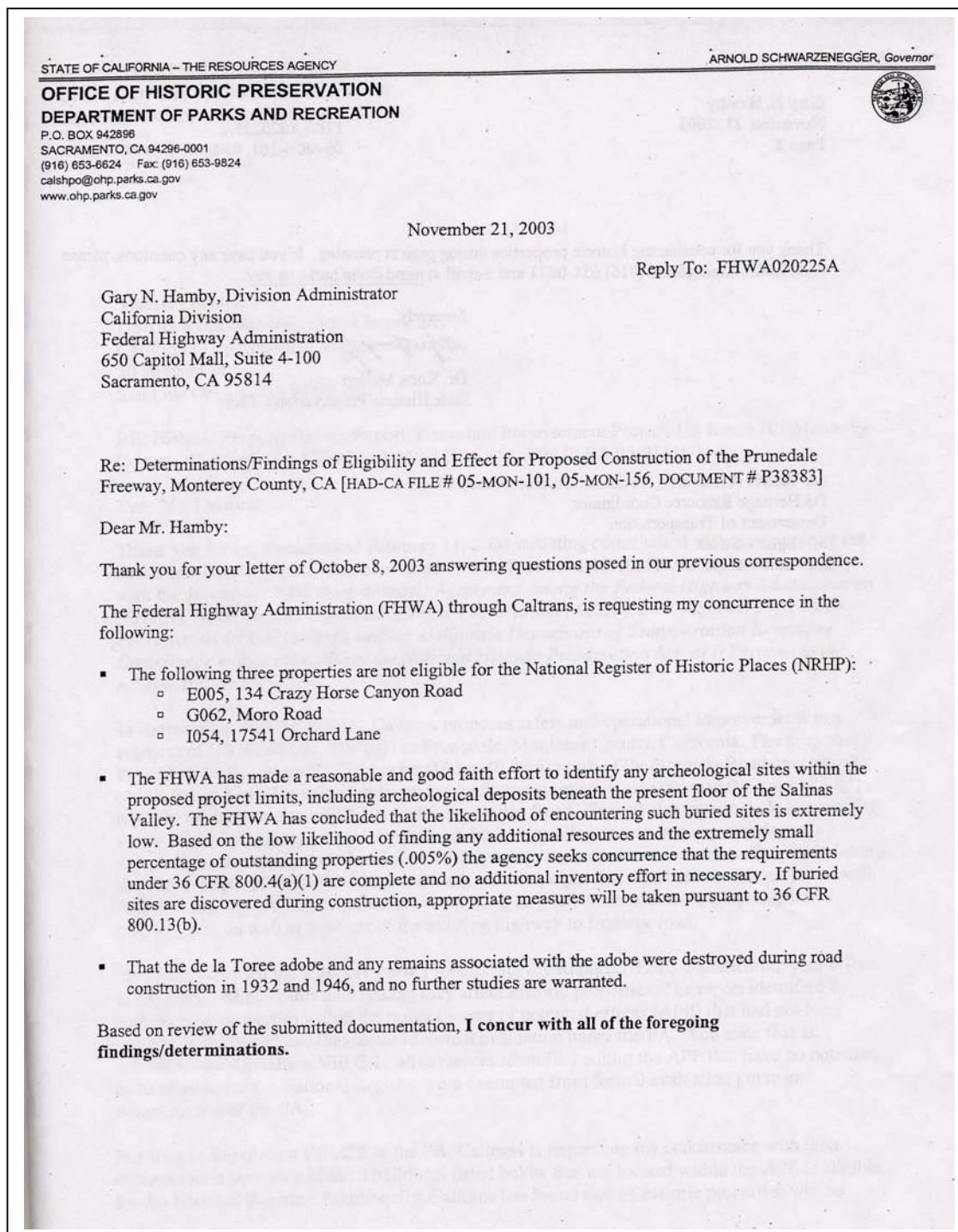


Appendix D Natural Resource Conservation Form AD 1006

U.S. Department of Agriculture FARMLAND CONVERSION IMPACT RATING							
PART I (To be completed by Federal Agency)				Date of Land Evaluation Request 10-14-2004			
Name of Project Prunedale Improvement Project				Federal Agency Involved FHWA			
Proposed Land Use Transportation				County and State Monterey, CA			
PART II (To be completed by NRCS)				Date Request Received By NRCS 10-18-04		Person Completing Form: Dorothy Deuling	
Does the site contain Prime, Unique, Statewide or Local Important Farmland? (If no, the FPPA does not apply - do not complete additional parts of this form)				YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	Acres Irrigated 260,073	Average Farm Size 1,277
Major Crop(s) Lettuce, Broccoli, Strawberry		Farmable Land in Govt. Jurisdiction Acres: 388,633 % 18.2		Amount of Farmland As Defined in FPPA Acres: 224,718 % 10.6			
Name of Land Evaluation System Used California State Index		Name of State or Local Site Assessment System N/A		Date Land Evaluation Returned by NRCS 10-19-04			
PART III (To be completed by Federal Agency)				Alternative Site Rating			
				Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly				93.0			
B. Total Acres To Be Converted Indirectly				0			
C. Total Acres In Site				220.7			
PART IV (To be completed by NRCS) Land Evaluation Information							
A. Total Acres Prime And Unique Farmland				38.8			
B. Total Acres Statewide Important or Local Important Farmland				5.6			
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted				0.0001			
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value				N/A			
PART V (To be completed by NRCS) Land Evaluation Criterion				82			
Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)							
PART VI (To be completed by Federal Agency) Site Assessment Criteria				Maximum Points	Site A	Site B	Site C
Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106							Site D
1. Area In Non-urban Use				(15)	15		
2. Perimeter In Non-urban Use				(10)	10		
3. Percent Of Site Being Farmed				(20)	1		
4. Protection Provided By State and Local Government				(20)	20		
5. Distance From Urban Built-up Area				(15)	0		
6. Distance To Urban Support Services				(15)	5		
7. Size Of Present Farm Unit Compared To Average				(10)	5		
8. Creation Of Non-farmable Farmland				(10)	0		
9. Availability Of Farm Support Services				(5)	0		
10. On-Farm Investments				(20)	0		
11. Effects Of Conversion On Farm Support Services				(10)	0		
12. Compatibility With Existing Agricultural Use				(10)	0		
TOTAL SITE ASSESSMENT POINTS				160	56		
PART VII (To be completed by Federal Agency)							
Relative Value Of Farmland (From Part V)				100	82		
Total Site Assessment (From Part VI above or local site assessment)				160	56		
TOTAL POINTS (Total of above 2 lines)				260	138		
Site Selected:				Date Of Selection		Was A Local Site Assessment Used?	
						YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	
Person For Selection:							
Name of Federal agency representative completing this form: Date:							



Appendix E Office of Historic Preservation Concurrence Letters

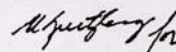


Gary N. Hamby
November 21, 2003
Page 2

FHWA020225A
05-MON-101, 05-MON-156, DOCUMENT

Thank you for considering historic properties during project planning. If you have any questions, please call Natalie Lindquist at (916) 654-0631 and e-mail at nlind@ohp.parks.ca.gov.

Sincerely,



Dr. Knox Mellon
State Historic Preservation Officer

cc: Valerie A. Levulett, Technical Studies Branch Chief
D5 Heritage Resource Coordinator
Department of Transportation
50 Higuera Street
San Luis Obispo, CA 93401-5415

STATE OF CALIFORNIA – THE RESOURCES AGENCY

ARNOLD SCHWARZENEGGER, Governor

**OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION**

P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-6624 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov
www.ohp.parks.ca.gov



January 23, 2004

Reply To: FHWA040217A

Valerie Levulett
District 5 Heritage Resources Coordinator
California Department of Transportation
50 Higuera Street
San Luis Obispo, CA 93401-5415

RE: Historic Property Survey Report, Prunedale Improvement Project, US Route 101 Monterey County, 05-MON-101, KP R146.8/159.3 (PM R91.2/99.0) EA 05-0161E0

Dear Ms. Levulett,

Thank you for your letter dated February 11, 2004 initiating consultation with me regarding the above-mentioned project. You have done this, and are consulting with me, in order to comply with the January 1, 2004 *Programmatic Agreement among the Federal Highway Administration (FHWA), the Advisory Council on Historic Preservation (ACHP), the California State Historic Preservation Officer (SHPO), and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the (PA)*.

In cooperation with the FHWA, Caltrans proposes safety and operational improvements to a segment of US Route 101 (US 101) in Prunedale, Monterey County, California. The proposed Prunedale Improvement Project begins 0.3 km (0.2 mi) north of the Boronda Road overcrossing of US 101 in Santa Rita, California, and extends approximately nine miles to 0.4 km (0.25 mi) north of the intersection of SR 101 and Echo Valley Road. Project elements include constructing a new 2.2 k (1.4 mi) segment of divided, six-lane, controlled-access freeway; a new grade-separated interchange; a new local-road overcrossing; a continuous concrete median barrier along the entire length of the project; and three box culverts, eight drainage basins, and one soundwall. Additionally, the project will convert two existing at-grade intersections to grade-separated intersections, as well as portions of the existing highway to frontage road.

You have provided me with a Historic Property Survey Report (HPSR) documenting your efforts to determine whether this undertaking may affect historic properties. The report identified 8 architectural properties within the project's area of potential effects (APE) that had not been previously evaluated and that required formal evaluation under the PA. You state that as authorized by stipulation VIII.C.1., all resources identified within the APE that have no potential to be eligible for the National Register were exempted from formal evaluation pursuant Attachment 4 of the PA.

Pursuant to Stipulation VIII.C.5 of the PA, Caltrans is requesting my concurrence with their determination that none of the 8 buildings listed below that are located within the APE is eligible for the National Register. Additionally, Caltrans has found that no historic properties will be

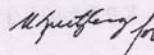
affected due to the absence of identified historic properties within the undertaking's APE and is notifying me of that finding pursuant to Stipulation IX.A.1 of the PA.

I have reviewed the documentation provided and concur in Caltrans' determination that the following properties are not eligible for the National Register.

- | | |
|----------------------------|----------------------------|
| ▪ 78 El Camino Real | ▪ 9770 Prunedale South Rd. |
| ▪ 17345 Blackie Rd. | ▪ 9750 Prunedale South Rd. |
| ▪ 17279 Blackie Rd. | ▪ 9726 Prunedale South Rd. |
| ▪ 9736 Prunedale South Rd. | ▪ 17559 Cross Road |

Thank you for considering historic properties during project planning. If you have any questions, please contact Andrea Galvin of my staff at (916) 653-4533 or by e-mail at agalv@ohp.parks.ca.gov.

Sincerely,



Dr. Knox Mellon
State Historic Preservation Officer

Appendix F Biological Opinion



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003



IN REPLY REFER TO:
PAS 1926.3041.3567

October 17, 2005

Gene Fong, Division Administrator
California Division
Federal Highway Administration
980 Ninth Street, Suite 400
Sacramento, California 95814-2724

Subject: Biological Opinion for the State Route 101, Prunedale Improvement Project,
Monterey County, California (Document # P52247) (1-8-05-F-27)

Dear Mr. Fong:

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion on the effects of the California Department of Transportation's (Caltrans) proposed State Route 101 Prunedale Improvement Project on the federally threatened California red-legged frog (*Rana aurora draytonii*) and Monterey spineflower (*Chorizanthe pungens* var. *pungens*) in accordance with section 7 of the Endangered Species Act of 1973, as amended (Act) (16 U. S. C. 1531 *et seq.*). The subject project would be funded by the Federal Highways Administration (FHWA) and would consist of constructing two new interchanges, improvements to an existing interchange, local road improvements, and the construction of additional median barriers in Prunedale, Monterey County, California. Your April 19, 2005, request for consultation was received on April 22, 2005.

The California tiger salamander (*Ambystoma californiense*) was listed as threatened on August 4, 2004 (69 Federal Register (FR) 47212). Your biological assessment (Caltrans 2005) included a determination that the proposed project is not likely to affect the California salamander. We concur with this determination. Significant barriers to migration from known occurrences are present and no California tiger salamanders have been found in wetlands within the project area. Critical habitat was designated for the California tiger salamander on August 23, 2005 (70 FR 49380). The action area for the proposed project, as described in this biological opinion, is outside the boundary of designated critical habitat for the California tiger salamander.

We proposed critical habitat for the California red-legged frog on April 13, 2004 (69 FR 19620). A final determination on this proposal is due in November 2005. The project site is within proposed critical habitat for the California red-legged frog and you determined that the project may affect but is not likely to adversely modify the proposed critical habitat. We concur with your determination that the proposed project will not adversely modify proposed critical habitat for the California red-legged frog. The project area does not contain the primary constituent

Gene Fong (1-8-05-F-27)

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elements which are essential to the conservation of the species. These are defined as: a) essential aquatic habitat; b) associated uplands; and c) dispersal habitat connecting essential aquatic habitat. The project would occur along State Route 101, a two-lane highway with a concrete divider. Although Prunedale Creek and other wetlands are present in areas to be permanently disturbed, these areas do not contain the primary constituent elements because the aquatic habitats are too shallow or do not flow or hold water throughout the development phase of California red-legged frog larvae and are surrounded by urban development and a four-lane highway.

On May 29, 2002, we designated critical habitat for the Monterey spineflower (67 FR 37498). Your analysis determined that there would be no effect to Monterey spineflower critical habitat from project activities. Based on our knowledge at the time of designation, we considered the primary constituent elements to be: a) sandy soils associated with active coastal dunes, coastal bluffs with deposition of windblown sand, inland sites with sandy soils, and interior floodplain dunes; b) plant communities that support associated species, including coastal dune, coastal scrub, grassland, maritime chaparral, oak woodland, and interior floodplain dune communities, and have a structure with openings between the dominant elements (e.g., scrub, shrub, oak trees, clumps of herbaceous vegetation); c) no or little cover by non-native species which compete for resources available for growth and reproduction of Monterey spineflower; and d) physical processes, such as occasional soil disturbance, that support natural dune dynamics along coastal areas. The only area within the Prunedale critical habitat unit that may be impacted occurs at the Crazy Horse Canyon Road/Echo Valley Road project area. Monterey spineflower critical habitat occurs on the eastern side of State Route 101 in this area. However, although surveys identified Monterey spineflower on the west side of the State Route 101, no Monterey spineflower plants were identified on the east side within the critical habitat boundary and you reported that the area did not contain sandy soils within the project boundaries. Therefore, the portion of critical habitat to be impacted does not contain the primary constituent elements. We concur with your determination that there would be no effect to critical habitat.

This biological opinion is based on information that accompanied the request for consultation which included a biological assessment (Caltrans 2005), informal discussions between our staffs, a site visit on August 19, 2005, and information in our files. A complete administrative record of this consultation is on file at the Ventura Fish and Wildlife Office.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

The purpose of the project is to improve safety along State Route 101 and intersecting local roadways, improve traffic flow along existing State Route 101, and improve accessibility to area homes, businesses, and services. A combination of heavy traffic, numerous uncontrolled access points, a poor local road network, and nonstandard roadway features, have contributed to the deterioration of operating conditions and an increase in collisions along this section of State Route 101 in Prunedale. The project would include construction of two new interchanges, one

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overcrossing, one undercrossing, improvements to local roads, and construction of additional median barriers at various locations throughout the project limits (Postmile 91.2 - 100.4). Construction is scheduled to begin May 1, 2009, and end May 1, 2012. The biological assessment includes an extensive list of the typical construction equipment used. The list includes large earth moving machinery as well as pavers, pile drivers, and drill rigs. The project consists of five construction zones, listed from south to north:

1. Russell Road/Espinosa Road Area,
2. Blackie Road/Reese Road Area,
3. San Miguel Canyon Road/Tustin Area,
4. Crazy Horse Canyon Road/Echo Valley Road Area, and
5. Dunbarton Road Area.

Russell Road/Espinosa Road Area

A 1.4-mile segment of divided four lane, controlled-access freeway would be constructed approximately 0.2 mile north of Boronda Road. This road segment would include a 69-foot wide median and a concrete median barrier that would begin at Russell Road. An undercrossing would be constructed at the intersection of State Route 101 and Russell Road/Espinosa Road where State Route 101 would be elevated. Approximately 0.62 mile north of the Russell Road/Espinosa Road undercrossing, a new grade-separated interchange would be constructed to include interchange ramps in a tight diamond pattern. Local roads in this area would be widened, upgraded, closed, or rerouted to accommodate the shifted traffic flow. Portions of the existing State Route 101 would be converted to frontage roads. Additional project elements in this area include construction of a sound wall, culvert modification, and construction of drainage basins. The project footprint in this area comprises approximately 58.8 acres consisting of 39 acres of paved and urban areas, 17.8 acres of agriculture (primarily cultivated row-crops), 1.7 acres of non-native annual grassland and other vegetation, and 0.3 acre of drainage areas or "other water channels."

Blackie Road/Reese Road Area

Traffic patterns in this area would be improved by the addition of an overcrossing connecting a new portion of Blackie Road to Reese Road. Other roads in this area would either be closed to State Route 101 access or restricted to right-in and right-out (no left turn) movements with the addition of a concrete median. Local roads would be extended and upgraded to support increased traffic on the east side of State Route 101. The project footprint in this area comprises approximately 14.3 acres consisting of 3 acres of rural and urban development, 1 acre of agriculture, 3 acres of non-native grassland and other vegetation, 1.3 acres of unknown habitat, 0.04 acre of valley needlegrass grassland, 0.4 acre of central coast riparian scrub, 5.3 acres of coast live oak woodland, 0.1 acre of seasonal wetland, and 0.1 acre of other water channel.

San Miguel Canyon Road/Tustin Area

The San Miguel Canyon Road intersection with State Route 101 would be modified to permit left turns and additional traffic lanes would be added on San Miguel Canyon Road between the southbound State Route 101 off-ramp and Prunedale North Road. The existing structure over

Gene Fong (1-8-05-F-27)

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State Route 101 would be widened and retaining walls are proposed adjacent to the shopping center. This project portion occurs within the Caltrans right-of-way and no additional habitats would be impacted by construction in this segment.

Crazy Horse Canyon Road/Echo Valley Road Area

Echo Valley Road would be realigned and joined to Crazy Horse Canyon Road with an overcrossing and a diamond shaped interchange at the location of the existing Crazy Horse Canyon Road and State Route 101. To maintain local access along the west side of State Route 101, Moro Road would be extended. A cul-de-sac and a new local road connecting Echo Valley Road to Shady Drive would also be constructed. Additional project elements in this area include construction of a drainage basin, construction of a fire lane between the new alignment of Echo Valley Road and Shady drive, and closure of all private points of access to State Route 101. The project footprint in this area comprises approximately 29.6 acres consisting of 6.7 acres of rural and urban development, 8.6 acres of non-native grassland and other vegetation, 0.9 acre of unknown habitat, 1.1 acres of central coast riparian scrub, 4.2 acres of coast live oak woodland, 7.3 acres of central maritime chaparral, 0.8 acre of seasonal wetland, and 0.1 acre of other water channel.

Dunbarton Road Area

The Dunbarton Road Area is included in the project description as it includes the placement of construction signs along the roadway within the existing Caltrans right of way.

Minimization Measures

Caltrans has proposed the following measures to minimize adverse effects to the California red-legged frog:

1. In areas that offer potential habitat value for the California red-legged frog, pre-construction surveys will be conducted.
2. To reduce disturbance in habitat areas to be temporarily disturbed, vegetation will be removed by hand, where feasible, instead of heavy equipment.
3. No water will be used from streams or ponds that support California red-legged frogs.
4. Construction boundaries and Environmentally Sensitive Areas will be established prior to construction.
5. A biological monitor will be on-site to maintain Environmentally Sensitive Area boundaries and to survey for California red-legged frogs whenever construction activities occur in suitable habitat.
6. Best management practices will be employed to reduce erosion and stormwater runoff.

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Caltrans has proposed the following measures to minimize adverse effects to the Monterey spineflower:

1. Vegetation in areas to be temporarily disturbed will be removed at ground level to reduce disturbance to the soil.
2. Retaining walls will be used to reduce the size of the project footprint wherever feasible.

In addition to the protection measures proposed above, Caltrans proposes to acquire land of equal or superior habitat to that of the area that would be disturbed by the proposed project or contribute funds to a preservation foundation to pool together funds for a larger property purchase and long term management. The proposed acquisition site will contain, at a minimum, occupied Monterey spineflower habitat and wetlands. Caltrans is currently working with the Elkhorn Slough Foundation which may have the opportunity to purchase a property that contains suitable breeding ponds for California red-legged frogs and populations of the Monterey spineflower and federally endangered Yadon's piperia (*Piperia yadonii*).

STATUS OF THE SPECIES

California Red-Legged Frog

The California red-legged frog was federally listed as threatened on May 23, 1996 (61 FR 25813). The Service has issued a final recovery plan (Service 2002). Critical habitat for the California red-legged frog was designated on March 13, 2001 (66 FR 14625). On November 6, 2002, the United States District Court for the District of Columbia set aside the designation and ordered the Service to publish a new critical habitat proposal for the California red-legged frog by March 2004 (*Home Builders Association of Northern California et al. versus Gale A. Norton, Secretary of the Department of Interior et al.* Civil Action No. 01-1291 (R.J.L.) U.S. District Court, District of Columbia). We proposed critical habitat once again for the California red-legged frog on April 13, 2004 (69 FR 19620). A final determination on this proposal is due November 2005.

The California red-legged frog is the largest native frog in the western United States ranging from 1.75 to 5.25 inches from the tip of the snout to the vent (Stebbins 2003). From above, the frog can appear brown, gray, olive, red, or orange, often with a pattern of dark flecks or spots. The back of the frog is bordered on either side by an often prominent ridge (dorsolateral fold) running from the eye to the hip. The hind legs are well-developed with large, webbed feet. A cream, white, or orange stripe usually extends along the upper lip from beneath the eye to the rear of the jaw. The undersides of adult frogs are white, usually with patches of bright red or orange on the abdomen and hind legs. The groin area sometimes exhibits bold black mottling with a white or yellow background.

The historical range of the California red-legged frog extended coastally from southern Mendocino County and inland from the vicinity of Redding, California, southward to

Gene Fong (1-8-05-F-27)

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northwestern Baja California, Mexico (Jennings and Hayes 1985, Schafer *et al.* 2004, Storer 1925). The California red-legged frog has sustained a 70 percent reduction in its geographic range as a result of several factors acting singly or in combination (Jennings *et al.* 1992). Only a few drainages are currently known to support California red-legged frogs in the Sierra Nevada foothills, compared to more than 60 historical records. In southern California, the California red-legged frog has essentially disappeared from the Los Angeles area south to the Mexican border; the only known, viable population in Los Angeles County is in San Francisquito Canyon on the Angeles National Forest.

Habitat loss and alteration, over-exploitation, and introduction of exotic predators were significant factors in the species' decline in the early- to mid-1900s. Reservoir construction, expansion of introduced predators, grazing, and prolonged drought fragmented and eliminated many of the Sierra Nevada foothill populations. Several researchers in central California have noted the decline and eventual disappearance of California red-legged frog once bullfrogs (*Rana catesbeiana*) become established at the same site (L. Hunt, in litt., 1993). Bullfrogs prey on California red-legged frogs (Twedt 1993) and interfere with their reproduction (Jennings and Hayes 1990, Twedt 1993).

California red-legged frogs have been found at elevations that range from sea level to about 5,000 feet. The frog uses a variety of habitat types, which include various aquatic systems, riparian, and upland habitats. There is much variation in how California red-legged frogs use the environment and in many cases they may complete their entire life cycle in a particular area without using other components (i.e., a pond is suitable for each life stage and use of upland habitat or a riparian corridor is not necessary). Populations appear to persist where a mosaic of habitat elements exists, embedded within a matrix of dispersal habitat. Here, local extinctions may be counterbalanced by recolonizations of new or unoccupied areas of suitable habitat. Adults are often associated with dense, shrubby riparian or emergent vegetation and areas with deep (> 28 inches) still or slow-moving water; the largest summer densities of California red-legged frogs are associated with deep-water pools with dense stands of overhanging willows (*Salix* spp.) and an intermixed fringe of cattails (*Typha latifolia*) (Jennings 1988). California red-legged frogs spend considerable time resting and feeding within dense riparian vegetation; it is believed the moisture and camouflage provided by the riparian plant community provide good foraging habitat and riparian vegetation provides cover during dispersal (Rathbun *et al.* 1993).

Breeding sites of the California red-legged frog are in aquatic habitats; larvae, juveniles and adult frogs have been collected from streams, creeks, ponds, marshes, deep pools and backwaters within streams and creeks, dune ponds, lagoons, and estuaries. California red-legged frogs frequently breed in artificial impoundments, such as stock ponds, given the proper management of hydro-period, pond structure, vegetative cover, and control of exotic predators. While frogs successfully breed in streams and riparian systems, high spring flows and cold temperatures in streams often make these sites risky egg and tadpole environments. California red-legged frogs also successfully breed in artificial ponds with little or no emergent vegetation and have been observed in stream reaches that are not cloaked in riparian vegetation. In a coastal marsh in San Mateo County, Reis (1999) found California red-legged frog egg masses that successfully

Gene Fong (1-8-05-F-27)

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produced tadpoles in water as shallow as 4 inches; adult frogs selected shallow and warm water locations over either cold or deep-water locations for laying eggs. An important factor influencing the suitability of aquatic breeding sites is the general lack of introduced aquatic predators.

California red-legged frogs are sensitive to high salinity. When eggs are exposed to salinity levels greater than 4.5 parts per thousand, 100 percent mortality occurs, and larvae die when exposed to salinities greater than 7.0 parts per thousand (Jennings and Hayes 1990). Nussbaum *et al.* (1983) state that early red-legged frog (*Rana a. aurora*) embryos are tolerant of temperatures only between 48 and 70 degrees Fahrenheit and both the lower and upper lethal temperatures are the most extreme known for any North American ranid frog. Data specific to the California red-legged frog are not available.

During periods of wet weather, starting with the first rains of fall, some individuals may make long-distance overland excursions through upland habitats to reach breeding sites. In Santa Cruz County, Bulger (2003) found marked California red-legged frogs moving up to 1.7 miles through upland habitats, via point to point, straight-line migrations without apparent regard to topography, rather than following riparian corridors. Most of these overland movements occurred at night and took up to two months. Similarly, in San Luis Obispo County Rathbun and Schneider (2001) documented the movement of a male California red-legged frog between two ponds that were 1.78 miles apart; this was accomplished in less than 32 days. However, most California red-legged frogs in the Bulger (2003) study were non-migrating frogs and always remained within 426 feet of their aquatic site of residence (half of the frogs always stayed within 82 feet of water). Rathbun *et al.* (1993) radio tracked several frogs near the coast in San Luis Obispo County at various times between July and January; these frogs also stayed rather close to water and never strayed more than 85 feet into upland vegetation. Nine California red-legged frogs radio-tracked from January to June, 2001, in East Las Virgenes Creek in Ventura County remained relatively sedentary as well; the longest within-channel movement was 280 feet and the furthest movement away from the stream was 30 feet (Scott 2002).

After breeding, California red-legged frogs often disperse from their breeding habitat to forage and seek suitable dry-season habitat. Cover within dry-season aquatic habitat could include boulders; downed trees; logs; agricultural features, such as drains, watering troughs, spring boxes, abandoned sheds, or hay-ricks; and industrial debris. California red-legged frogs use small mammal burrows and moist leaf litter (Jennings and Hayes 1994, Rathbun *et al.* 1993); incised stream channels with portions narrower and deeper than 18 inches may also provide habitat (61 FR 25813). This type of dispersal and habitat use, however, is not observed in all red-legged frogs and is most likely dependent on the year to year variations in climate and habitat suitability and varying requisites per life stage. For the California red-legged frog, suitable habitat is potentially all aquatic and riparian areas within the range of the species and includes any landscape features that provide cover and moisture (61 FR 25813).

California red-legged frogs breed from November through March; earlier breeding has been recorded in southern localities (Storer 1925). Males appear at breeding sites from 2 to 4 weeks

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before females (Storer 1925). They typically call in small, mobile groups of three to seven individuals to attract females (Jennings and Hayes 1985). Female California red-legged frogs deposit egg masses on emergent vegetation so that the masses float on the surface of the water (Hayes and Miyamoto 1984). Egg masses contain about 2,000 to 5,000 moderate-size (0.08 to 0.11 inch in diameter), dark reddish brown eggs (Storer 1925, Jennings and Hayes 1985). Eggs hatch in 6 to 14 days (Storer 1925). Larvae undergo metamorphosis 2.5 to 7 months after hatching (Storer 1925, Jennings and Hayes 1990, Service 2002). Egg predation is infrequent; most mortality probably occurs during the tadpole stage (Licht 1974), although eggs are susceptible to being washed away during high stream flows. Schmieder and Nauman (1994) report that the California red-legged frog eggs have a defense against predation which is possibly related to the nature of the egg mass jelly. Schmieder and Nauman (1994) report that California red-legged frog larvae are highly vulnerable to fish predation; larvae appear to be most vulnerable to fish predation immediately after hatching when the nonfeeding larvae are relatively immobile. Sexual maturity can be attained at 2 years of age by males and 3 years of age by females (Jennings and Hayes 1985); adults may live 8 to 10 years (Jennings et al. 1992) although the average life span is considered to be much lower.

The diet of California red-legged frogs is highly variable. Tadpoles probably eat algae (Jennings et al. 1992). Hayes and Tennant (1985) found invertebrates to be the most common food item for adults. Vertebrates such as Pacific tree frogs (*Hyla regilla*) and California mice (*Peromyscus californicus*), represented over half of the prey mass eaten by larger frogs (Hayes and Tennant 1985). Feeding activity probably occurs along the shoreline and on the surface of the water. Hayes and Tennant (1985) found juvenile frogs to be active diurnally and nocturnally, whereas adult frogs were largely nocturnal.

Monterey spineflower

The Monterey spineflower, a small, prostrate annual in the buckwheat family, was listed as threatened on February 4, 1994 (59 FR 5499). On May 29, 2002, we designated critical habitat for the Monterey spineflower (67 FR 37498). Critical habitat occurs along the east side of State Route 101 but the areas to be impacted, which are in the Crazy Horse Canyon Road/Echo Valley Road area, do not contain the primary constituent elements and surveys did not find any Monterey spineflower plants within the project area.

Information contained in this account was obtained primarily from the final rule for listing, the Recovery Plan for Seven Coastal Plants and the Myrtle's Silverspot Butterfly (Service 1998), the final rule for designation of critical habitat (67 FR 37498), and Reveal and Hardham (1989).

Monterey spineflower occurs in sandy soils within coastal habitats from the Monterey Peninsula (Monterey County) northward along the coast to southern Santa Cruz County, and inland to the coastal plain of the Salinas Valley. As of the 1998 recovery plan, 29 occurrences are presumed extant on property managed by the U.S. Department of Defense, the County of Monterey, the City of San Jose, State Parks, the Pebble Beach Company, and other private entities, with the largest populations thought to occur on the undeveloped areas of former Fort Ord.

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At coastal sites ranging from the Monterey Peninsula north to Manresa State Beach, Monterey spineflower is found in active coastal dune systems and on coastal bluffs upon which windblown sand has been deposited. The distribution of suitable habitat is subject to dynamic shifts caused by patterns of dune mobilization, stabilization, and successional trends in coastal dune vegetation that increase in cover over time. Accordingly, individual colonies of Monterey spineflower, found in gaps between stands of scrub, shift in distribution and size over time. Other native plants associated with Monterey spineflower in these areas include beach bur (*Ambrosia chamissonis*), beach sagewort (*Artemisia pycnocephala*), mock heather (*Ericameria ericoides*), Monterey Indian paintbrush (*Castilleja latifolia*), and beach pea (*Lathyrus littoralis*). At some locations, Monterey spineflower occurs in close proximity to the federally endangered sand gilia (*Gilia tenuiflora* ssp. *arenaria*), Menzies' wallflower (*Erysimum menziesii* ssp. *menziesii*), and Smith's blue butterfly (*Euphilotes enoptes smithi*), and the threatened western snowy plover (*Charadrius alexandrinus nivosus*).

At more inland sites, Monterey spineflower occurs on sandy, well-drained soils in a variety of plant communities, most frequently maritime chaparral, valley oak woodland, and grassland. Within grassland communities, Monterey spineflower occurs along roadsides, in firebreaks, and in other disturbed sites, while in oak woodland, chaparral, and scrub communities, it occurs in sandy openings between shrubs. In older stands with a high cover of shrubs, Monterey spineflower is restricted to roadsides, firebreaks, and trails that bisect these communities. Prior to the onset of human use of this area, Monterey spineflower may have been restricted to openings within these communities created by animal movement corridors, herbivory, and wildfires. The southwestern edge of Monterey spineflower habitat on former Fort Ord was once likely continuous with habitat found in the community of Del Rey Oaks and at the Monterey Airport. Other inland sites that support Monterey spineflower are located in the area between Aptos and La Selva Beach in Santa Cruz County and near Prunedale in northern Monterey County. At some of these locations, Monterey spineflower occurs in close proximity with the federally endangered Yadon's piperia and robust spineflower (*Chorizanthe robusta* var. *robusta*).

Farther up the Salinas River, Monterey spineflower is found on a dune located within the river floodplain near Soledad, Monterey County (California Natural Diversity Data Base (CNDDB) 2005). Two historic sites for Monterey spineflower occur near that locality, but the plant has likely been extirpated from these sites due to conversion to agriculture and channelization activities along the Salinas River. The dune near Soledad is the only one of its size and extent between there and the river mouth.

Monterey spineflower is a short-lived annual species that germinates during the winter months and flowers from April through June. Although its pollination ecology has not been studied, Monterey spineflower is likely visited by a wide array of pollinators. Observations of pollinators on other species of *Chorizanthe* that occur in Santa Cruz County have included leaf cutter bees (megachilids), at least six species of butterflies, flies, and sphecids wasps. Each flower produces one seed; depending on plant vigor, dozens or hundreds of seeds could be produced per individual. The importance of pollinator activity in seed set has been demonstrated by the production of seed with low viability where pollinator access was limited (Harding-Lawson

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Associates 2000). The plants turn a rusty hue as they dry through the summer months, eventually shattering during the fall. Seed dispersal is facilitated by the involucre spines, which attach the seed to passing animals. While animal vectors most likely facilitate dispersal between colonies and populations, the prevailing coastal winds undoubtedly play a part in scattering seed within colonies and populations.

Several coastal dune restoration efforts within the last decade have included measures to eliminate non-native species and to propagate and reintroduce Monterey spineflower, notably at Moss Landing North Harbor, Pajaro Dunes, and the University of California's Moss Landing Marine Laboratory. Such efforts have contributed to our understanding that Monterey spineflower readily grows where suitable sandy substrates occur and competition with other plant species is minimal. Where Monterey spineflower occurs within native plant communities, along the coast as well as at more interior sites, it occupies microhabitat sites found between scrub and shrub stands with little cover from other herbaceous species. Where Monterey spineflower occurs within grassland communities, the density of Monterey spineflower may decrease with an increase of the density of other herbaceous species.

Residential development, agricultural land conversion, recreational use, sand mining, dune stabilization, and competition with non-native plants, such as European beachgrass (*Ammophila arenaria*) and iceplant (*Carpobrotus* sp.), have all reduced the populations and habitat of the Monterey spineflower. Habitat loss and conversion from agricultural and residential development, activities at military institutions, and invasion by non-native plants were identified as the primary threats to Monterey spineflower at the time of listing (59 FR 5505). Hikers and equestrians may trample these plants at various locations throughout its range. Most of the historical locations of the Monterey spineflower in the Salinas Valley have probably been extirpated by conversion of grassland and valley oak woodland habitats to agricultural fields.

ENVIRONMENTAL BASELINE

The implementing regulations for section 7(a)(2) of the Act define the "action area" as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 Code of Federal Regulation 402.02). For the purposes of this biological opinion, we consider the action area to include all areas where people and equipment would be working or staging. Based upon the information provided in the biological assessment (Caltrans 2005) we identify the action area as follows: All construction and staging activities from post mile 91.2 through 100.4. This includes the construction footprint plus and additional 100 meters around all wetland habitat and water features in the Blackie Road/Reese Road project area and the Crazy Horse Canyon Road/Echo Valley Road project area and an additional 5 meters from the project footprint in the remaining upland habitats.

The biological assessment describes considering the entire action area to consist of a 5 meter buffer outside of the project footprint in all habitats. However upland habitat for California red-legged frogs would be directly and indirectly affected by construction activities further than 5 meters from the project footprint. We believe that upland habitat adjacent to wetlands and water

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features is important for the survival of the California red-legged frog and therefore determine that the action area for this project should extend 100 meters from construction activities. Several studies (Bulger 2003, Rathbun et al. 1993, Scott 2002) have demonstrated that California red-legged frogs generally remain close to their aquatic site of residence although, California red-legged frogs are known to disperse long distances (1.7 miles Bulger 2003, Rathbun and Schneider 2001) during the breeding season. Bulger (2003) recommends that "conservation and resource management planning for activities that alter the local environment should strive to retain a well-distributed array of natural habitat elements that provide protective cover for California red-legged frogs to a distance of at least 100 meters (328 feet) from occupied aquatic sites."

The proposed project is located in Prunedale, a rural area of northern Monterey County. The topography ranges from gently sloping to steep hills cut by narrow canyons with permanent and intermittent streams. The project elevation ranges from approximately 10 feet above sea level at the Blackie Road/Reese Road project area to 580 feet above sea level northwest of the Crazy Horse Canyon Road/State Route 101 intersection. State Route 101 generally runs north to south in this area and is a four-lane highway with concrete medians. There are currently openings in the concrete medians to allow left hand turns; however, this project will close many of those openings and replace them with interchanges and overpasses.

The project area contains both natural plant communities and areas extensively modified by human activity. The Prunedale area is a mosaic of oak woodlands, central maritime chaparral, and open grasslands mixed with agricultural lands, residential areas, and commercial developments. Invasive plant species are present throughout the project area, especially in areas of urban development. Common species include jubata grass (*Cortaderia jubata*), French broom (*Cytisus monspessulanus*), and iceplant. Exotic aquatic animal species also present within the project area at the Blackie Road/Reese Road project area include bullfrogs, crayfish (*Astacus astacus*), and mosquito fish (*Gambusia affinis*). Terrestrial exotic species in the project areas include red fox (*Vulpes vulpes*), and European starling (*Sturnus vulgaris*).

California red-legged frog

California red-legged frogs are known from the Prunedale area and several records occur in the California Natural Diversity Database (CNDDB). Caltrans surveys confirmed the locations of CNDDB records at Prunedale Creek (which is within the Blackie Road/Reese Road project footprint) where two adult frogs were observed; no breeding pools were located in this area. In the Dunbarton Area, California red-legged frogs were observed at two locations in an intermittent stream located approximately 0.62 mile north of Crazy Horse Road and east of State Route 101. Up to seven California red-legged frogs were observed at one site, which may be an indication that the location might be a successful breeding site.

Significant habitat modification was observed in the Blackie Road/ Reese Road project area during a site visit in August 2005 (Niceswanger personal observation). A segment of Prunedale Creek on the west side of State Route 101 has been bladed and recontoured and upland habitat

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within approximately 100 meters surrounding Prunedale Creek is denuded and has been disced. Geoffrey Gray of Caltrans mentioned that he had also observed this habitat modification but was not aware of who had completed the work or when it was done. Water was flowing in the modified creek channel and could provide summer refugia in areas that are not denuded. However, the barren upland areas are currently unsuitable.

Unoccupied aquatic habitat or areas where surveyors did not observe California red-legged frogs occurs near the Blackie Road/Reese Road project. A small intermittent stream is located west of State Route 101 and south of Prunedale Creek and originates from springs located adjacent to strawberry fields before it disappears into annual grasslands near the corner of Blackie Road and State Route 101. The drainage is dry most of the year but may provide aquatic habitat during the wet season.

Additional unoccupied habitat is located near the Crazy Horse Canyon Road/Echo Valley Road project area. A broad seasonal wetland and intermittent stream occur on the east side of State Route 101. Although there are no pools located within the project footprint, pools were located upstream that could provide breeding habitat as well as summer refugia. The wetland area to be affected is also suitable habitat. Approximately 4 acres of California red-legged frog habitat will be temporarily impacted and 1.3 acres will be permanently impacted.

Monterey spineflower

Small, scattered Monterey spineflower populations were identified in the Crazy Horse Canyon Road/Echo Valley Road Area on the west side of State Route 101. These locations occur in disturbed sandy soil that appears to have been cleared or scraped in the past. Monterey spineflower was found along the linear pathways that were cleared through shrub habitat. Central maritime chaparral habitat occurs in this vicinity and may harbor a seed bank of Monterey spineflower that would be expressed if conditions changed to open the shrub canopy. Approximately 0.4 acre of Monterey spineflower habitat will be temporarily impacted and 0.2 acre will be permanently impacted.

EFFECTS OF THE ACTION

California red-legged frog

California red-legged frogs that are not detected during the initial field surveys may be killed or injured during construction activities and habitat disturbance in riparian and upland areas. Injury or mortality may result from being crushed by earth moving equipment and worker foot traffic. Leaking or spilling of fuel or other toxic fluids during routine equipment maintenance and operations could result in acute or chronic effects to individuals of this species. These effects would be minimized by clearly demarcating and limiting work areas to the smallest size possible, establishing environmentally sensitive areas, and designating a qualified biologist to monitor construction activities and move California red-legged frogs out of harm's way. Relocating individual California red-legged frogs may minimize injury or mortality. However, relocated

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California red-legged frogs could be injured or killed if they attempt to return to the project area during construction activities. Standard practices will be implemented to reduce noise and protect soil, water, and other resources during equipment operation.

The capture and handling of California red-legged frogs to move them from a work area could adversely affect individuals. Injury or mortality may occur as a result of improper handling, containment, or transport of individuals or from releasing them into unsuitable habitat. These effects would be reduced or prevented by using only biologists approved by the Service to conduct these activities.

Chytrid fungus (*Batrachochytrium dendrobatidis*) could be spread if infected amphibians are relocated and introduced into areas with healthy amphibians or vice-versa. Chytrid fungus is a water-borne fungus that can be spread through direct contact between aquatic animals and by a spore that can move short distances through the water. The fungus only attacks the parts of an animal's skin that have keratin (thickened skin), such as the mouthparts of tadpoles and the tougher parts of adults' skin, such as the toes. The fungus can decimate amphibian populations, causing fungal dermatitis, which usually results in death in 1 to 2 weeks. Infected animals may spread the fungal spores to other ponds and streams before they die. Once a pond has become infected with chytrid fungus, the fungus stays in the water for an undetermined amount of time. It is possible that during the relocation of California red-legged frogs proposed by the applicant that infected individuals or equipment could introduce chytrid fungus into areas where it did not previously occur. If this occurs, many California red-legged frogs could be affected.

An indirect effect of the construction of the projects is their eventual use and maintenance. Use of the roads could injure or kill California red-legged frogs as a result of vehicle strikes. Opportunities for California red-legged frogs to forage, shelter, and breed would also be reduced temporarily by construction activities and permanently by the elimination of upland and wetland habitats due to the project footprints. Some wetland values will be permanently lost as culverts and concrete drainage areas are built. However, temporarily disturbed riparian areas would be revegetated after construction activities. Erosion and sedimentation have been addressed in the design of the project to limit runoff from roads.

Monterey spineflower

Construction activities would cause loss of individual plants and would disrupt the seed bank as sand is displaced. Equipment and personnel may trample and uproot plants and destroy seeds by crushing. Although Monterey spineflower was not found on the east side of the Crazy Horse Canyon Road/Echo Valley Road area in recent surveys, construction activities may adversely affect them by destroying part of the soil seedbank and by temporarily disturbing habitat.

Equipment operating in this area has the potential for the greatest impact by trampling and destroying seeds. However, by following the protection measures discussed above, namely limiting the project footprint and erecting retaining walls to preserve habitat, impacts to this area will be kept to a minimum. Disturbance will be temporary in 0.4 acre and restoration activities will begin after the completion of the construction project to prevent erosion.

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Caltrans proposes to acquire land of equal or superior habitat to that of the area that would be disturbed by the proposed project or contribute funds to a preservation foundation to pool together funds for a larger property purchase and long term management. The proposed acquisition site will contain at a minimum occupied Monterey spineflower habitat and wetlands to compensate for the permanently lost habitat due to project construction. As mentioned previously, Caltrans is currently working with the Elkhorn Slough Foundation which may have the opportunity to purchase a property that contains suitable breeding ponds for California red-legged frogs and populations of the Monterey spineflower and Yadon's piperia.

In summary, the construction activities would temporarily affect approximately 5.3 acres of California red-legged frog habitat however; only 1.3 acres will be impacted permanently. Approximately 0.6 acre of Monterey spineflower habitat would be affected; however, only 0.2 acre would be impacted permanently. With the implementation of Caltrans' minimization measures, the impacts of the construction activities to the California red-legged frog in the form of injury or mortality are expected to be minimal. We anticipate that few, if any, individuals of the species are likely to be killed or injured during this work.

CUMULATIVE EFFECTS

Cumulative effects are those impacts of future State and private actions that are reasonably certain to occur in the project area. Future Federal actions would be subject to the consultation requirements established in section 7 of the Act and, therefore, are not considered cumulative to the proposed project. We are unaware of any other non-federal actions that are reasonably certain to occur in the action area.

CONCLUSION

After reviewing the current status of the California red-legged frog and Monterey spineflower, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, it is our biological opinion that the Prunedale Improvement Project for post mile 91.2 to post mile 100.4, is not likely to jeopardize the continued existence of the California red-legged frog or the Monterey spineflower. We base this conclusion on the following reasons:

1. In comparison with the amount of habitat available to the California red-legged frog elsewhere in this portion of Monterey County, a small amount of habitat would be permanently lost or temporarily disturbed. The 1.3 acres of habitat for the California red-legged frog that would be permanently lost, is of marginal quality and represents a small portion of the species' range.
2. The 0.2 acre of habitat for the Monterey spineflower that would be permanently lost represents a small portion of the species' range.
3. No California red-legged frog breeding habitat would be adversely affected by the proposed project.

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4. FHWA and Caltrans will implement numerous measures to reduce the adverse effects of the proposed project on the California red-legged frog and Monterey spineflower.
5. Caltrans has proposed compensating for California red-legged frog and Monterey spineflower habitat that will be permanently lost by acquiring land of equal or superior habitat to that of the area that would be disturbed by the proposed project or contributing funds to a preservation foundation to pool together funds for a larger property purchase and long term management.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this incidental take statement.

Section 9 of the Act does not address the incidental take of listed plant species. Consequently, this biological opinion does not contain an incidental take statement for the Monterey spineflower. Protection of listed plants is provided in that the Act requires a Federal permit for the removal or reduction to possession of endangered or threatened plants from Federal lands. Furthermore, it is unlawful for any person to remove, cut, dig up, or damage or destroy a listed plant species in knowing violation of any law or regulation of any state or in the course of any violation of a state criminal trespass law (section 9(a)(2)(B) of the Act).

The measures described below are non-discretionary and FHWA must make them binding conditions of any grant or permit issued to Caltrans, as appropriate, for the exemption in section 7(o)(2) to apply. FHWA has a continuing duty to regulate the activity covered by this incidental take statement. If FHWA fails to require Caltrans to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. To monitor the impact of incidental take, FHWA must report the progress of the action and its impact on the California red-legged frog and the Monterey spineflower to the Service as specified in the incidental take statement [50 CFR §402.14(i)(3)].

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All California red-legged frogs found within the project area may be subject to take in the form of capture during relocation efforts. A subset of captured California red-legged frogs may experience a significant disruption of normal behavioral patterns to the point that reaches the level of harassment. California red-legged frogs that remain in the project area may be subject to increased predation, be crushed by workers conducting project activities, or be otherwise injured or killed.

California red-legged frogs may be taken only within the defined boundaries of the action area of the construction project as provided in the Description of the Proposed Action and the Environmental Baseline sections of this biological opinion. However, we cannot determine the precise number of California red-legged frogs that may be killed, injured, harassed, or harmed as a result of the construction activities. Numbers and locations of California red-legged frogs within a population vary from year to year. Incidental take of the California red-legged frog would be difficult to detect because of their small body size and finding dead or injured specimens is unlikely. Take by predation would likely be impossible to detect.

This biological opinion does not exempt any activity from the prohibitions against take contained in section 9 of the Act that is not incidental to the action as described in this biological opinion. Take that occurs outside of demarcated work areas or from any activity not described in this biological opinion is not exempted from the prohibitions against take described in section 9 of the Act.

REASONABLE AND PRUDENT MEASURES

We believe the following reasonable and prudent measures are necessary and appropriate to minimize take of the California red-legged frog:

1. FHWA and Caltrans must ensure that the level of incidental take anticipated in this biological opinion is commensurate with the analysis contained herein.
2. Biologists must be authorized by the Service before they survey for, capture, and move California red-legged frogs in the action area.
3. California red-legged frogs within the action area that are at risk of injury or mortality as a result of project activities must be moved.
4. Biologists who handle California red-legged frogs must ensure that their activities do not transmit diseases or pathogens.
5. Caltrans must implement worker education programs and well-defined measures to reduce take of California red-legged frogs during project activities.

Our evaluation of the effects of the proposed action includes consideration of the measures to minimize the adverse effects of the proposed action on the California red-legged frog that were

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developed by FHWA and Caltrans and repeated in the Description of the Proposed Action portion of this biological opinion. Any subsequent changes in these measures proposed by FHWA and Caltrans may constitute a modification of the proposed action and may warrant reinitiation of formal consultation, as specified at 50 CFR 402.16. These reasonable and prudent measures are intended to supplement the protective measures that were proposed by FHWA and Caltrans as part of the proposed action.

TERMS AND CONDITIONS

To be exempt from the prohibitions of section 9 of the Act, FHWA must ensure that Caltrans complies with the following terms and conditions, which implement the reasonable and prudent measures described above. These terms and conditions are non-discretionary.

1. The following terms and conditions implement reasonable and prudent measure 1:
 - a. To ensure that the measures proposed by FHWA and Caltrans are effective and are being properly implemented, Caltrans must contact the Service immediately if it becomes aware that a California red-legged frog has been killed or injured by project activities. At that time, the Service and the FHWA must review the circumstances surrounding the incident to determine whether additional protective measures are required. Project activities may continue pending the outcome of the review, provided that Caltrans proposed protective measures and the terms and conditions of this biological opinion have been and continue to be fully implemented.
 - b. If more than 2 California red-legged frog adults, 1 tadpole, or 1 egg mass are found dead or injured during construction activities in any single calendar year, Caltrans or FHWA must contact the Service to determine whether formal consultation should be re-initiated. This threshold is intended to determine whether project activities may be affecting California red-legged frogs more substantially than we anticipated.
2. The following term and condition implements reasonable and prudent measure 2:

FHWA or Caltrans must submit the credentials of persons who would survey for, capture and relocate California red-legged frogs to us for review and approval at least 30 days prior to conducting these activities.
3. The following term and condition implements reasonable and prudent measure 3:

Prior to the onset of any construction or habitat enhancement activities, Service-approved biologists must identify appropriate areas to receive translocated California red-legged frogs in the project area. These areas must be in proximity to the capture site but outside any area likely to be adversely impacted by construction activities, support suitable

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vegetation, and be free of exotic predatory species (e.g., bullfrogs, crayfish) to the best of the Service-approved biologists' knowledge.

4. The following term and condition implements reasonable and prudent measure 4:

To ensure that diseases are not conveyed between work sites by the Service-approved biologists, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force must be followed at all times. A copy of the code of practice is enclosed. The Service-approved biologist may substitute a bleach solution (0.5 to 1.0 cup of bleach to 1.0 gallon of water) for the ethanol solution. Care must be taken so that all traces of the disinfectant are removed before entering the next aquatic habitat.

5. The following terms and conditions implement reasonable and prudent measure 5:

- a. Caltrans must use pre-existing access routes and staging areas whenever possible and clearly designate boundaries of any new areas prior to use.
- b. A Service-approved biologist must conduct a brief training session for all project personnel before any project-related activities begin within the project area. At a minimum, the training must include a description of the California red-legged frog and Monterey spineflower, their habitats, the general provisions and protections afforded by the Act, the measures to be implemented during work activities to protect the species, and a review of project boundaries.
- c. The project area must be kept clean. All food-related trash items that may attract predators must be enclosed in sealed containers and removed daily from the project area.
- d. Hazardous materials must be stored at least 100 feet from aquatic habitats in a designated location with plastic lining for containment of accidental spills. Refueling of vehicles must occur at least 100 feet from aquatic habitats. All project-related spills of hazardous materials within or adjacent to the construction zone must be cleaned up immediately. All mechanized equipment operated within 100 feet of aquatic habitats must be maintained daily to avoid leaks.

REPORTING REQUIREMENTS

FHWA or Caltrans must provide a written annual report to the Service by January 31 of each year this biological opinion is in effect. The report must discuss activities for the previous calendar year and include a table summarizing California red-legged frog sightings and take for all years of this project. The report must document the number of California red-legged frogs captured and translocated pursuant to project activities; the date and time of capture; specific location of capture; approximate age of individuals captured and translocated; a description of

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translocation sites including existing habitat types and their proximity to non-native predators; and the number and life stage of bullfrogs and other non-native species removed.

The report must also include the number of California red-legged frogs killed or injured, if any, and the date(s) such incidental take occurred. The report must contain a discussion of the activities conducted, any problems encountered in implementing terms and conditions or minimization measures, and any recommendations for improving the protective measures. The report must also include a map identifying locations of all California red-legged frogs the translocation areas for California red-legged frogs, and the locations of all bullfrogs found. This document will assist the Service and the FHWA in evaluating future measures for the conservation of the California red-legged frog.

DISPOSITION OF DEAD OR INJURED SPECIMENS

Within 3 days of locating any dead or injured California red-legged frogs you must notify the Service's Division of Law Enforcement in writing (370 Amapola Avenue, Suite 114, Torrance, California 90501) and the Ventura Fish and Wildlife Office in writing and by telephone (2493 Portola Road, Suite B, Ventura, California 93003; (805) 644-1766). The report must include the date, time, location of the carcass, a photograph, cause of death (if known), and any other pertinent information.

Care must be taken in handling dead specimens to preserve biological material in the best possible state for later analysis. Should any injured California red-legged frogs survive, FHWA or Caltrans must contact the Service regarding their final disposition. The remains of California red-legged frogs must be placed with the California Academy of Sciences Herpetology Department (Contact: Jens Vindum, Collections Manager, California Academy of Sciences Herpetology Department, 875 Howard Street, San Francisco, California, 94103, (415) 321-8289). Arrangements regarding proper disposition of potential museum specimens must be made with the California Academy of Sciences by Caltrans, or their biological consultants prior to conducting any project-related activities.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to use their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. We recommend the following conservation measures to promote recovery of the California red-legged frog, Monterey spineflower and other sensitive species.

1. FHWA and Caltrans should involve the Service in long-range planning so its projects are designed and implemented in a manner that meets the conservation needs of the California red-legged frog and Monterey spineflower.

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2. FHWA and Caltrans should ensure that material hauled to project sites for fill is free of weedy exotic species. A qualified biologist should inspect the source of any fill material prior to its transport to project sites.
3. FHWA and Caltrans should implement an invasive species eradication program to remove bullfrogs (within guidelines of California Department of Fish and Game) and exotic plant species from the project area and all restoration areas.
4. FHWA and Caltrans should collect and stockpile the topsoil from Monterey spineflower population areas to be permanently affected and use in revegetation efforts.

REINITIATION NOTICE

This concludes formal consultation on the proposed construction of the Prunedale Improvement Project for post mile 91.2 to post mile 100.4. As provided at 50 CFR 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

If you have any questions, please contact Julie Niceswanger of my staff at (805) 644-1766, extension 290.

Sincerely,



David M. Pereksta
Assistant Field Supervisor
Santa Cruz/San Benito/Monterey

Enclosure

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The Declining Amphibian Populations Task Force Fieldwork Code of Practice

- A. Remove mud, snails, algae, and other debris from nets, traps, boots, vehicle tires, and all other surfaces. Rinse cleaned items with sterilized (e.g., boiled or treated) water before leaving each work site.
- B. Boots, nets, traps, and other types of equipment used in the aquatic environment should then be scrubbed with 70 percent ethanol solution and rinsed clean with sterilized water between study sites. Avoid cleaning equipment in the immediate vicinity of a pond, wetland, or riparian area.
- C. In remote locations, clean all equipment with 70 percent ethanol or a bleach solution, and rinse with sterile water upon return to the lab or "base camp". Elsewhere, when washing-machine facilities are available, remove nets from poles and wash in a protective mesh laundry bag with bleach on the "delicates" cycle.
- D. When working at sites with known or suspected disease problems, or when sampling populations of rare or isolated species, wear disposable gloves and change them between handling each animal. Dedicate sets of nets, boots, traps, and other equipment to each site being visited. Clean them as directed above and store separately at the end of each field day.
- E. When amphibians are collected, ensure that animals from different sites are kept separately and take great care to avoid indirect contact (e.g., via handling, reuse of containers) between them or with other captive animals. Isolation from unsterilized plants or soils which have been taken from other sites is also essential. Always use disinfected and disposable husbandry equipment.
- F. Examine collected amphibians for the presence of diseases and parasites soon after capture. Prior to their release or the release of any progeny, amphibians should be quarantined for a period and thoroughly screened for the presence of any potential disease agents.
- G. Used cleaning materials and fluids should be disposed of safely and, if necessary, taken back to the lab for proper disposal. Used disposable gloves should be retained for safe disposal in sealed bags.

The Fieldwork Code of Practice has been produced by the Declining Amphibian Populations Task Force with valuable assistance from Begona Arano, Andrew Cunningham, Tom Langton, Jamie Reaser, and Stan Sessions.

For further information on this Code, or on the Declining Amphibian Populations Task Force, contact John Wilkinson, Biology Department, The Open University, Walton Hall, Milton Keynes, MK7 6AA, UK. E-mail: DAPTF@open.ac.uk Fax: +44 (0) 1908-654167